SALTERS-NUFFIELD ADVANCED BIOLOGY
Edexcel context-led Biology for 2008

Whether you are starting SNAB AS or just considering the possibility, welcome. This leaflet gives you a feel for what the course is like.

SNAB is taught through real-life biology. For example, most A-level biology courses start with cell biology or biochemistry. We don't. We start with an account of Mark, a 15-year-old who had a stroke, and Peter, an adult who had a heart attack. We then go on from the details of their cases to look at the factors that make it more likely that any of us will suffer from a stroke or heart attack.

This allows you to meet the biochemistry of fats and carbohydrates bit by bit, as you need to know them to understand about strokes and heart diseases, rather than all at once.

Topics

In the AS year you study four topics. Each takes about half a term, including practical work. This gives time to do coursework and to revise for the exams. Here is a summary.

Topic 1 Lifestyle, health and risk

• The concept of risks to health, how these can be assessed, and what affects our perceptions of risk.
• The heart and circulation, and understanding how these are affected by our diet and activity.
• The biochemistry of food and why this matters.

Topic 2 Genes and health

• How changes in DNA can cause genetic disease, using cystic fibrosis as an example.
• Cell membrane structure, how substances move across membranes, and how proteins are made.
• Treatments for genetic disease, and the ethical issues raised by today's genetics.

Topic 3 Voice of the genome

• Gene structure and function.
• Stem cells, their potential in medicine, and the arguments for and against their use.
• Regulation of gene expression and the control of development in organisms.

Topic 4 Biodiversity & natural resources

• What is biodiversity? classification, adaptation and natural selection. Disappearing biodiversity.
• Plant anatomy and function; human use of plants.

Exams

The exams in SNAB are pretty much like those in any advanced biology course, but they reward your ability to reason biologically and to use what you have learnt in new contexts. Most of the exam questions are structured, though as you go through the course you begin to do short essays, building up to longer ones. Essay writing will be very useful for you if you go on to university or to any sort of job that requires you to be able to write reports.

What is the coursework like?

At AS, the coursework includes you writing a report either on a biological issue that interests you, or on a visit to a place you have been to where biology is used. Students seem to enjoy this. The other aspect of the coursework is based on the practicals you do.

ICT

At AS there are animations on such things as protein synthesis, the control of heart rate, and cell division. These help you to understand the more difficult bits of biology. There are maths and chemistry tutorials to help you with these as you meet them in biology.

There are also review tests (so you can check you know what you need to know before starting the next topic), more formal end-of-topic tests, an interactive glossary to explain terms in the student books, and so on.

You access all this via the internet.

We hope you enjoy the course.