AS AND A LEVEL BIOLOGY

Switching from AQA to Edexcel A (Salters-Nuffield)

This document is designed to help you compare the existing 2008 AQA Biology specification (2410) with the new 2015 Edexcel Biology A (Salters-Nuffield) specification.

The document gives an overview, at the topic level, of where the material covered in the existing AQA Biology specification can be found in the new Edexcel Biology A (Salters-Nuffield) specification. The following tables then give a more detailed breakdown of the Edexcel specification, and highlight areas of difference. These will help you see where material that you currently teach in the AQA specification is not present in the Edexcel specification; or where the Edexcel specification incorporates material that is new to you.

As a general overview, the 2015 Edexcel Biology A (Salters-Nuffield) specification is split into eight topics. At AS, these topics are: Lifestyle, Health & Risk; Genes & Health; Voice of the Genome; and Biodiversity & Natural Resources. In the second year of the A level, the topics are: On the Wild Side; Immunity, Infection & Forensics; Run for your Life; and Grey Matter.

The course is based on the Salters-Nuffield (SNAB) approach, a context-led approach which, through a dedicated set of resources, introduces the biology using case studies and applications that draw on areas of biology, before considering the underlying biological concepts. The course can also be taught in a thematic way, focusing on areas such as biochemistry, cells, ecology, genetics and so on.

As well as great biology within the specification, there are other ways in which we can help support your teaching on our new A level Biology A (Salters-Nuffield) specification. Our free support includes:

- additional sets of question papers
- Results Plus, now with Mock Analysis service
- Exam Wizard, our online bank of past paper questions
- Getting Started Guides, with course planners
- “Getting Ready to Teach” events
- documents to help deliver the mathematics and practical aspects of the specification
- worksheets for each “core practical” in the specification

Overview of content

This mapping provides a very broad overview of how the content of the two courses compare.

AQA (2008)	Edexcel A (Salters-Nuffield) (2015)
Unit 1 Biology and disease	Topic 1 Lifestyle, Health and Risk
	Topic 6 Immunity, Infection and Forensics
Unit 2 The variety of living organisms	Topic 3 Voice of the Genome
	Topic 4 Biodiversity and Natural Resources
Unit 4 Populations and environment	Topic 5 On the Wild Side
	Topic 7 Run for your Life
Unit 5 Control in cells and in organisms	Topic 2 Genes and Health
	Topic 8 Grey Matter

In-depth comparison

Edexcel A (Salters-Nuffield) (2015)	AQA (2008)	What's new for you	What do you no longer teach
Topic 1 Lifestyle, Health and Risk	This topic covers material from the AQA specification topics: 3.1.2, 3.1.4, 3.1.5 and 3.2.7	✓ analysis of energy budgets and diet ✓ effects of diet on BMI and CHD ✓ effect of caffeine on heart rate in daphnia ✓ ethical use of invertebrates in research	✓ gas exchange surfaces in different organisms
Topic 2 Genes and Health	This topic covers material from the AQA specification topics: 3.1.2, 3.1.3, 3.1.4, 3.2.2 and 3.5.6	✓ investigation of membrane structure including the effect of alcohol concentration	✓ digestive system and absorption of products of digestion ✓ cholera
Topic 3 The Voice of the Genome	This topic covers material from the AQA specification topics: 3.1.3, 3.2.2, 3.2.5, 3.2.6, 3.4.8 and 3.5.7	✓ ultrastucture of prokaryotic cells ✓ specialisation of mammalian gametes ✓ mechanisms of fertilisation in mammals ✓ root tip squash preparation to identify stages of mitosis ✓ function of the lac-operon ✓ effect of epigenetic changes on gene activation	✓ influences on genetic diversity ✓ the effect of oestrogen on gene transcription ✓ role of small interfering RNA
Topic 4 Biodiversity and Natural Resources	This topic covers material from the AQA specification topics: 3.2.1, 3.2.4, 3.2.8, 3.2.10, 3.2.11 and 3.4.8	✓ endemism ✓ arrangement of microfibrils in plant fibres and their exploitation ✓ identification of plant fibres ✓ importance of water and inorganic ions to plants ✓ tensile strength of plant fibres ✓ development of drug testing ✓ conditions for bacterial growth ✓ antimicrobials ✓ sustainability ✓ seed banks and captive breeding	✓ courtship behaviour ✓ variation in population size ✓ human populations ✓ passage of water through a plant

Topic 5 On the Wild Side	This topic covers material from the AQA specification topics: 3.1.2, 3.2.4, 3.4.1, 3.4.3, 3.4.5, 3.4.6, 3.4.7 and 3.4.8	✓ investigation of the effect of temperature on development of organisms (brine shrimp) ✓ conflict between human needs and conservation.	✓ variation in population sizes ✓ human populations ✓ nitrogen cycle details ✓ nitrogen (fertilisers and eutrophication)
Topic 6 Immunity, Infection and Forensics	This topic covers material from the AQA specification topics: 3.1.1, 3.1.4, 3.1.6, 3.2.10, 3.4.6, 3.5.6 and 3.5.8	✓ determining the time of death of a mammal ✓ how HIV infects human cells ✓ "evolutionary race" between pathogens and their host ✓ difference between bacteriostatic and bactericidal antibiotics	✓ use of vaccines and monoclonal antibodies including evaluating methodologies and ethical issues connected with their use ✓ use of reverse transcriptase ✓ *in vitro* and *in vivo* cloning ✓ interpreting information relating to the use of recombinant DNA technology ✓ ethical, moral, social issues of recombinant DNA ✓ medical diagnosis using DNA probes (Southern blotting)
Topic 7 Run for Your Life	This topic covers material from the AQA specification topics: 3.1.5, 3.4.4, 3.5.3, 3.5.4, and 3.5.5	✓ muscles, tendons, skeleton and ligaments enable movement ✓ use of ECGs to diagnose CVD ✓ analysis of data relating to excessive exercise ✓ technology of key-hole surgery ✓ ethical issues of the use of performance enhancing drugs	✓ control of blood glucose concentration ✓ control of mammalian oestrus
Topic 8 Grey Matter	This topic covers material from the AQA specification topics: 3.2.3, 3.5.1 and 3.5.2	✓ action of rods ✓ structure of the human brain ✓ MRI, fMRI, PET and CT scanning ✓ critical period of visual development ✓ role of animal models in research into brain development ✓ habituation ✓ chemical imbalance and health ✓ effect of drugs on synapses ✓ genome sequencing ✓ GMOs ✓ nature vs nurture	✓ survival and response ✓ Pacinian corpuscle (replaced by rod) ✓ mammalian hormones ✓ histamine and prostaglandins