Switching to OCR B from AQA

Introduction

We are really excited about our GCE Biology B qualification. Whether taking on the AS or the full A Level, this fantastic course is a great qualification for those with an interest in the subject. Why choose Biology B?

- The 'Big Ideas' of Biology are covered
- Popular and engaging topics from previous Biology and Human Biology qualifications are included
- Biology B is enjoyable to teach and learn, giving students the essentials for biology-related higher education courses as well as many transferable, marketable skills
- There are many opportunities for 'hands-on' practical, linking to our flexible practical assessment model
- The biological topics are presented in a clear and logical linear order with practical and maths opportunities highlighted.

Textbook comparison

We have not included a textbook comparison in this switching document as there are a number of textbooks available for each exam board's qualifications, and the order and organisation of content within these textbooks can vary. However, similarities in content across exam boards mean that it is possible to use any textbook for the core content of any board's qualifications. The specification can be used to identify relevant content, as well as that which is not required for a specific qualification. If you need further clarification on any specific content, you can email our Subject Advisor team at science@ocr.org.uk.

Support from OCR

We offer a range of support to teachers of our qualifications. This includes:

- A dedicated Subject Advisor team, with teaching and assessment experience, available to answer your queries and support your delivery of our qualifications. You can contact us by email at science@ocr.org.uk or by phone on 01223 553998.
- Monthly newsletters highlighting new resources, CPD courses, and other news about our qualifications.

- An online scheme of work builder which helps you create a bespoke scheme of work using the extensive range of resources we have provided for each specification.
- A wide range of support materials, including handbooks covering practical and mathematical skills, delivery guides, lesson elements, practical activity suggestions, candidate exemplar resources, and more.
- Free access to ExamBuilder, our mock assessment service that allows you to create your own bespoke assessments.
- Termly regional Science Teacher Networks, giving you the opportunity to meet with other teachers and our Subject Advisors.
- CPD courses, including courses for teachers new to teaching our qualifications and courses on outcomes from previous examination series to help inform your teaching.
- You can also follow and interact with our Subject Advisors on Twitter (@ocr_science).

Key differences

OCR Biology B	AQA
Flexible practical assessment allows you to use your own practical activities or select from our suggested activities	Fixed set of 12 practical activities you have to deliver
Practical skills take centre stage, detailed in full at the start of the specification in a separate module for **clarity** and prominence	Required practical activities listed in the specification
A section of **multiple choice questions** in the exams to allow breadth of coverage	No multiple choice questions
No essay questions – shorter extended response questions throughout the exams to allow a range of topics to be assessed	A long essay required at A Level
All **28 maths skills** covered in our free maths skills handbook and further supported with our online 'Maths for Biology' resources	Some skills supported by online resources

Content

The content within the OCR Biology B specification covers the 'Big Ideas' of biology in engaging contexts. We've laid it out to support the co-teaching of the AS and A level and provide a logical linear progression through the A level.

OCR Biology B	AQA
Module 1: Practical skills Planning, implementing, analysis and evaluation Plus all the skills to be covered in the Practical Endorsement	The same practical skills, as mandated by the DfE, are listed in Chapters 7 and 8 of the AQA specification
Module 2: Cells, chemicals for life, transport and gas exchange • Cells and microscopy • Water and its importance in plants and animals • Proteins and enzymes • Nucleic acids • The heart and monitoring heart function • Transport systems in mammals • Transport systems in plants • Gas exchange in mammals and plants	**3.1 Biological molecules** (all sub-sections: monomers and polymers; carbohydrates; lipids; proteins, nucleic acids; ATP; water; inorganic ions) **3.2 Cells** (2 of the 4 sub-sections: cell structure; transport across cell membranes) **3.4 Genetic information, variation and relationships between organisms** (3 of the 7 sub-sections: DNA, genes and chromosomes; DNA and protein synthesis; Genetic diversity can arise as a result of mutation or during meiosis) **3.8 The control of gene expression** (1 of the 4 sub-sections: Alteration of the sequence of bases in DNA can alter the structure of proteins) **3.3 Organisms exchange substances with their environment** (3 of the 4 sub-sections: surface area to volume ratio; gas exchange; mass transport)

OCR Biology B	AQA
Module 3: Cell division, development and disease control • The developing cell • The developing individual • The development of species • Pathogenic microorganisms • The immune system • Controlling communicable disease • The cellular basis of cancer and treatment • Respiratory diseases and treatment	**3.2 Cells** (2 of the 4 sub-sections: All cells arise from other cells; cell recognition and the immune system) **3.4 Genetic information, variation and relationships between organisms** (4 of the 7 sub-sections: Genetic diversity and adaptation; species and taxonomy; Biodiversity within a community; investigating diversity)
Module 4: Energy, reproduction and populations • Cellular respiration • Metabolism and exercise • Fertility and assisted reproduction • Effects of ageing on reproduction • Photosynthesis, food production and management of the environment • The impact of population increase • Plant reproduction	**3.5 Energy transfers in and between organisms** (all sub-sections: photosynthesis; respiration; energy and ecosystems; nutrient cycles)
Module 5: Genetics, control and homeostasis • Patterns of inheritance • Population genetics and epigenetics • Gene technologies • The nervous system • Monitoring visual function • Effects of ageing on nervous system • Homeostasis • Hormonal control of blood glucose	**3.5 Energy transfers in and between organisms** (2 of the 4 sub-sections: photosynthesis; respiration) **3.6 Organisms respond to changes in their internal and external environments** (all sub-sections: stimuli, both internal and external, are detected and lead to a response; nervous coordination; skeletal muscles; homeostasis) **3.7 Genetics, populations, evolution and ecosystems** (all sub-sections: inheritance;

OCR Biology B	AQA
• Kidney function and malfunction	populations; evolution may lead to speciation; populations in ecosystems) **3.8 The control of gene expression** (3 of the 4 sub-sections: Gene expression is controlled by a number of features; using genome projects; gene technologies allow the study and alteration of gene function allowing a better understanding of organism function and the design of new industrial and medical processes)
Appendix 5d: Mathematical requirements • Arithmetic and numerical computation • Handling data • Algebra • Graphs • Geometry and trigonometry	**Chapter 6: Mathematical requirements and exemplifications** • Arithmetic and numerical computation • Handling data • Algebra • Graphs • Geometry and trigonometry

Note: one major topic present in the AQA specification does not appear in the OCR B specification: ***3.3.3 Digestion and absorption***

Assessment

OCR Biology B	AQA
AS Paper 1: Foundations of Biology Modules 1-3 50% of AS Written paper 1 hour 30 minutes 70 marks Section A multiple choice questions, 20 marks. Section B short structured questions, covering problem solving, calculations, practical and theory, 50 marks.	**AS Paper 1: Topics 1-4 & practical skills** 50% of AS Written paper 1 hour 30 minutes 75 marks 65 marks short answer questions, 10 marks comprehension.
AS Paper 2: Biology in Depth, Modules 1-3 50% of AS Written paper 1 hour 30 minutes 70 marks Short structured questions and extended response questions, problem solving, calculations, practical and theory.	**AS Paper 2: Topics 1-4 & practical skills** 50% of AS Written paper 1 hour 30 minutes 75 marks 65 marks short answer questions, 10 marks extended response.
A Level Paper 1: Fundamentals of Biology Modules 1-5 41% of A level Written paper 2 hours 15 minutes 110 marks Section A multiple choice questions, 30 marks. Section B short structured questions, and extended response questions, problem solving, calculations, practical and theory 80 marks.	**A Level Paper 1: Topics 1-4 & practical skills** 35% of A level Written paper 2 hours 91 marks 76 marks short and long answer questions, 15 marks extended answers.

OCR Biology B	AQA
A Level Paper 2: Scientific Literacy in Biology Modules 1-5 37% of A level Written paper 2 hours 15 minutes 100 marks Advance notice article (underpins 20-25 marks). Short structured questions and extended response questions, problem solving, calculations, practical and theory.	**A Level Paper 2: Topics 5-8 & practical skills** 35% of A level Written paper 2 hours 91 marks 76 marks short and long answer questions, 15 marks extended answers.
A Level Paper 3: Practical Skills in Biology Modules 1–5 22% of A level Written paper 1 hour 30 minutes 60 marks Short structured questions and extended response questions, problem solving, calculations, practical and theory.	**A Level Paper 3: Topics 1-8 & practical skills** 30% of A level Written paper 2 hours 78 marks 38 marks structured questions. 15 marks analysis of experimental data 25 marks essay question.

Want to switch to OCR?

If you're an OCR-approved centre, all you need to do is download the specification and start teaching.

Your exams officer can complete an expression of interest form which enables us to provide appropriate support to them. When you're ready to enter your students, you just need to speak to your exams officer to:

1. Make estimated entries by 10 October so we can send you any early release materials, prepare the question papers and ensure we've got enough examiners.
2. Make final entries by 21 February

If you are not already an OCR-approved centre please refer your exams officer to the centre approval section of our admin guide.

Practical Endorsement Administration (A Level only)

The requirements for the practical endorsement have been set by the Department for Education and Ofqual working with all awarding bodies to ensure a common approach.

Just as when following the AQA A Level Biology qualification, your A Level students studying OCR Biology B will need to demonstrate to you, their teacher(s), that they are consistently and routinely competent in each of the skills and techniques defined for A Level Biologists.

You will need to:

- Keep records of carrying out practical activities as well as your assessment of competence of each of your students in each of these skills and techniques. This can be done, if you wish, using our OCR tracker spreadsheet.
- Designate a 'Lead Teacher' who will need to make sure that they have completed the online Lead Teacher training
- Email us at science@ocr.org.uk to let us know you've started teaching the qualification. This will make sure we have up-to-date information on your centre for planning monitoring visits. When a monitoring visit takes place at your centre for Biology it will be carried out by an OCR-appointed monitor applying the criteria agreed across all awarding organisations. Up-to-date details on the monitoring process are available on the Positive about practical page.

Students need to keep records of their practical work, which can be done in whatever format best suits you and your students, be it a lab book, a loose leaf folder or an electronic record.

Help and guidance are available from our Positive about practical page.

Next steps

1. Familiarise yourself with the specification, sample assessment materials and teaching resources on the OCR Biology B qualification page of the OCR website.

2. Browse the online delivery guides for teaching ideas and use the Scheme of Work builder to create your personal scheme of work.

3. Get a login for our secure extranet, Interchange – allows you to access the latest past/practice papers and use our results analysis service, Active Results.

4. Sign up to receive subject updates by email.

5. Sign up to attend a training event or take part in webinars on specific topics running throughout the year and/or our Q&A webinar sessions every half term.

6. Attend one of our free teacher network events that are run in each region every term. These are hosted at the end of the school day in a school or college near you, with teachers sharing best practice and subject advisors on hand to lead discussion and answer questions.

7. Follow us on Twitter (@ocr_science) where you can have discussions with other teachers and OCR Subject Advisors, and where new resources are developed and posted first.

