

TEACHING OCR A-LEVEL BIOLOGY FOR THE FIRST TIME

CODE **8683**

ABOUT THIS COURSE

This course, refreshed for Autumn 2022 is specifically targeted and designed for all teachers new or recently new to teaching OCR A-Level Biology. The sessions are designed to improve teachers' understanding of the OCR specification and ensure their students have the best opportunity to maximise potential grades.

PROGRAMME

Overview of the AQA A-level Biology course including challenges and what to expect from pupils 10.00 – 10.30am

- Key messages from the Summer 2022 Exams and preparing for 2023
- Recognising which areas will be most challenging for you and how to address these issues
- How to develop a teaching plan that reflects the assessment objective weightings and the areas which require more intense teaching

Expectations at A-Level 10.30 – 11.00am

- The transition between GCSE and A-Level
- What do successful A-Level students do?
- What do Grade A/A* response look like?
- What do Grade D responses look like?

Discussion: coffee break 11.00 – 11.15am

How to Teach Component 1: Biological Processes 11.15 – 12.15pm

- Practical strategies to develop students' use of technical language and scientific terms
- Ways to build students' confidence when applying scientific knowledge, principles and concepts in unfamiliar contexts
- Planning and teaching the some more demanding topics: meiosis, kidney and the chemiosmotic theory
- Making complicated concepts easy

How to Effectively Embed Maths Skills into your teaching 12.15 – 1.00pm

- Analysing ways to embed maths skills in teaching to develop the skills of constructing and interpreting tables and graphs, using powers and indices, understanding measures of dispersion and solving algebraic equations.
- Demonstrating examples that can be used to build students' confidence when translating information between graphical, numerical and algebraic forms and applying biological formulae in response to exam questions e.g. volume of a cylinder, standard deviation, RQ and population growth of microorganisms.
- Applying skills that students find difficult in exam questions e.g. using appropriate significant figures, percentage change, percentage error and statistical tests
- Teaching students to answer maths-based exam questions – using metacognitive modelling, and modelling as a scaffolding technique to support the less confident mathematicians.

Lunch and informal discussion 1.00 – 2.00pm

Effectively teaching the Practical Skills 2.00 – 2.45pm

- The essential terminology that needs constant reinforcement – the 'language of measurement' such as accuracy, precision and validity
- Direct assessment of practical skills in the PAGs – what the moderators are looking for in the students' evidence and in the teacher's records
- Teaching experimental design – activities that build students' confidence in selecting apparatus, equipment and techniques
- Developing students' evaluation skills – strategies to help them identify limitations in experimental procedures and suggest improvements.
- Teaching students the skills of describing data, explaining data and making conclusions in response to exam questions

Key ideas for teaching Genetics, evolution and ecosystems 2.45 – 3.30pm

- Teaching ideas for concepts that students find challenging such as linkage, speciation and the Hardy-Weinberg principle
- Strategies to ensure students have a clear understanding of biomass transfer, recycling and management of ecosystems
- Teaching genome sequencing – examples of how they may be asked to apply their knowledge and understanding and use it synoptically.
- Answering exam questions on Patterns of Inheritance.
- Analysing levels of response questions. Examples of how to teach students to

How to maximise students' exam performance 3.30 – 4.00pm

- Methodologies that boost student attainment: how to improve students by one grade, targeting top grades (A-A*).
- Teaching towards the 'endgame', what language to use, ensure you are marking 'like the examiner' and secure grading
- Exam questions and model answers, looking at what success looks like

LOCATION/DATE

London

Thursday 10 November 2022

COURSE LEADER

Fiona Jones is an experienced A-Level Biology teacher and Head of Biology. She has successfully led teams through curriculum change and has a breadth of experience encompassing many aspects of post-16 education. She is a current A-Level Biology examiner, and as such, understands how important it is that students acquire and develop the skills necessary for success. She is an experienced trainer and has delivered a range of courses for both students and teachers.

WHO SHOULD ATTEND?

- New or recently new teachers of OCR A-Level Biology
- Heads of Biology
- Heads of Science

BENEFITS OF ATTENDING

- Fully understand the complexities of the OCR A-Level Biology specification
- Examine how to maximise success in the NEA Component
- Gain insight into the content, the exam structure and the how exams are marked
- Develop ways to improve outcomes across the ability range
- Examine lots of ideas on how the maths and practical skills can be embedded throughout the course
- Take away some activities that can be adapted for use when teaching a range of different topics