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Introduction

Cambridge OCR Advanced Sciences

The new Cambridge OCR Advanced Sciences course provides complete coverage of the revised OCR AS and A2 Level science specifications (Biology, Chemistry A and Physics A) for teaching from September 2008. There are two books for each subject – one covering AS and one covering A2. Some material has been drawn from the existing Cambridge Advanced Sciences books; however the majority is new.

The course has been developed in an innovative format, featuring Cambridge's new interactive PDFs on CD-ROM in the back of the books, and free access to a dedicated website. The CD-ROM provides additional material, including detailed objectives, hints on answering questions, and extension material. It also provides access to web-based e-learning activities to help students visualise abstract concepts, processes.

The books contain all the material required for teaching the specifications, and can be used either on their own or in conjunction with the interactive PDFs and the website.

In addition, Teacher Resource CD-ROMs with book PDFs plus extra material such as worksheets, practical activities and tests, are available for each book. These CD-ROMs also provide access to the new Cambridge OCR Advanced Sciences Planner website with a week-by-week adaptable teaching schedule.

Introduction to Chemistry 2 for OCR – the chemistry A2 text

This book covers the entire OCR A2 Chemistry A specification for first examination in 2010. Chapter 1 revisits AS Level organic chemistry. Chapters 2 to 10 correspond to Unit F324, Rings, Polymers and Analysis. Chapters 11 to 17 correspond to Unit F325, Equilibria, Energetics and Elements. Each chapter covers one of the numbered sections within the three Modules in Unit F324, and within the three Modules in Unit F325. The content of the chapters is generally arranged in the same sequence as in the specification.

The book builds on the material covered in Chemistry 1 for OCR. The language is kept simple, to improve accessibility for all students, while still maintaining scientific rigour throughout. Care is taken to introduce and use all the specialist terms that students need to gain a complete understanding of the chemical concepts introduced. In the text, key terms are highlighted in bold.

The depth and breadth of treatment of each topic is pitched at the appropriate level for OCR A2 students. The accompanying CD-ROM also contains some extension material that goes a little beyond the requirements of the specification, which should interest and stretch more able students.

Some of the text and illustrations are based on material from the endorsed text Chemistry 2, which covered the earlier OCR specification, while some is completely new. All of it has been reviewed and revised, ensuring that the new specification is fully covered. In addition to the main content in each chapter, there are also How Science Works boxes, describing issues, applications or events, which put the chemical content introduced into a social context.

Self-assessment questions (SAQs) in each chapter provide opportunities to check understanding. They often address misunderstandings that commonly appear in examination answers, and will help students to avoid such errors. Some SAQs are marked, with a vertical red bar, as ‘stretch and challenge’ questions. These ask students to draw together their ideas about a topic, and to organise and discuss these in a well-structured and broad-ranging answer. These questions give students the opportunity to demonstrate their potential, and may help them to recognise areas of weakness in which further work is needed. Past examination questions at the end of each chapter allow students to practise answering exam-style questions. The answers to these, along with exam-style mark schemes and hints on answering questions, are found on the accompanying CD-ROM.
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