

Choosing GCSE Textbooks

The vast majority of schools and colleges will have already chosen courses for the new Science GCSE courses first taught in September 2007. However, you may have yet to choose and purchase textbooks to support the courses you are offering. There is a bewildering array of books and support material out there, from a variety of publishers. This is an overview of what is on offer for each specification, with some suggestions on what you might like to think about when making choices for your school.

From speaking to teachers from a range of different types of school, it is clear that textbooks are used for a wide variety of purposes and this will influence your choice of book. However, publishers and writers do not always seem to have an articulated idea of what their books are for. Some attempt to be a summary and learning device, others try to expand and explain complicated ideas. Not all authors appear to have noticed that science education has moved on and there is often very little acknowledgement of what students may know already. Some of the published packages have concentrated on providing extensive e-resources, which may compensate for the shortcomings or limitations of the books.

The best books have:

- A clear sense of who the book is written for.
- Photographs and drawings that are fresh and add value and interest to the written text.
- Experienced authors who have the skills to embrace new approaches and keep the science accurate even if there is relatively little text.

The worst books have:

- Illustrations of ancient demonstrations that may not work and have long been superseded.
- Photographs of familiar objects to illustrate obvious points and fill up the space.
- Elision of complicated ideas to one or two sentences that do nothing to explain or acknowledge that these are difficult ideas.

Some of the things to consider when choosing text books:

- Quality of the explanations, particularly for difficult concepts. Are there any significant errors in the physics?
- Appropriateness of the examples used to illustrate ideas and concepts - are they up to date and relevant to both boys and girls?
- Layout of pages and difficulty of language used - are they appropriate for the target students?
- Do you want separate foundation and higher tier books or one that will cater for a range of abilities?
- If there is a single book is there appropriate differentiation within it?

- Do the examples and photographs recognize the diversity of backgrounds and experience of students?
- Do the photographs add to the quality of the books or do they just fill up space?
- How useful are the books for class use?
- How useful are the books for homework?
- Are there enough appropriate questions to practice calculations?
- How well is 'How Science Works' addressed? This may be via a separate chapter but can also be written into the text itself, so that it arises out of the context(s) being discussed.
- Do you need Science and Additional Science books or separate Physics, Chemistry and Biology texts?

Summary of resources available for each course.

OCR 21st Century Science

Oxford University Press – OCR endorsed

These resources are written by the project team who developed the course. These include Robin Millar, Jennifer Burden and Peter Campbell. There are 2 levels of book for the Science course plus books for Additional Science, Additional Applied Science, Entry Level and separate Physics, Chemistry and Biology texts. They are supported by a very comprehensive ipack on CD-ROMs. The books are intended to be course companions, for both class and homework and have flexible page layouts and graduated questions.

Longman 21st Century Science, series editor Penny Johnson.

These books come in with 2 levels of book for Science and Additional Science, plus a higher tier book for Further Science. The books are supported by CD-ROMs called ActiveBook and ActiveTeach, which have digital interactive versions of the books as well as a range of ICT resources. These resources use the double-page spread format, with many photographs and illustrations plus a summary box of one or two key sentences and up to 12 questions on each spread.

AQA GCSE Science Suite

Nelson Thornes, series editor Lawrie Ryan. AQA endorsed and approved. By Ann Fullick, Patrick Fullick, Jim Breithaupt,

There is a book each for Science, Additional Science and Additional Applied Science, as well as separate Physics, Chemistry and Biology texts. They are supported by comprehensive teacher's books and e-science CD-ROMs. The books use double-page spreads and there are plenty of summary and end of topic questions. Although attractively laid out, there is probably too much text for foundation level students and the impression is of fairly traditional text books.

Longman Science for AQA, series editor Nigel English.

There is one book for each of Science and Additional Science, plus an additional book for the extension units. The books are supported by CD-ROMs called ActiveBook and ActiveTeach, which have digital interactive versions of the books as well as a range of ICT resources. These resources use the double-page spread format, with many

photographs and illustrations plus a learning outcomes box and graded questions on each spread.

Heinemann from Harcourt, Science Uncovered, series editor Keith Hirst. Author team includes Ben Clyde, Bev Cox, Terry Mansfield, David Sang.

These books come in two levels for Science and one for Additional Science and Additional Applied Science, as well as separate Physics, Chemistry and Biology texts. They are supported by Science Uncovered AQA Online. The books use double-page spreads, but each has a flexible format depending on the content. How science works is integrated into the text and difficult concepts are given appropriately detailed explanations.

Hodder Murray, series editors Nigel Heslop and Graham Hill.

This resource has books at 2 levels for Science and Additional Science as well as separate science textbooks. There are texts for Additional Applied Science and Applied Science (Double Award) as well. The books are supported by CD-ROMs of worksheets, teacher's guides and interactive presentations. There are good quality graphics and an attractive layout, although the books are fairly traditional in style.

Collins Education, series editor Ken Gadd.

There are books for each of Science and Additional Science, plus an additional book for the extension units for Physics, Chemistry and Biology. Differentiated "3-panel double spreads" are designed to enable all abilities to be taught using the same book. Information is crammed into every page, with key words forming a running feed across the bottom. There is also a Whiteboard Resources CD-ROM including Photorealistic Virtual Investigations and teacher support.

Cambridge Learning – Science Foundations for AQA. Author team includes: David Glover, Jean Martin and Helen Norris.

This resource comprises Science, Additional Science and separate science textbooks, with lessons and teacher support material available on CD-ROM and online. The books use the double-page spread format, with more difficult contexts and questions highlighted. There is a useful 'What you need to remember' box on each page.

Edexcel 360 Science

Collins Education, series editor Brian Arnold. endorsed by Edexcel.

There are books for each of Science and Additional Science, plus an additional book for the extension units for Physics, Chemistry and Biology. Differentiated "3-panel double spreads" are designed to enable all abilities to be taught using the same book. Information is crammed into every page, with key words forming a running feed across the bottom. There is also a Whiteboard Resources CD-ROM including Photorealistic Virtual Investigations and teacher support.

Longman Edexcel 360Science, series editor Richard Shewry.

There is a book each for Science and Additional Science, plus an additional book for the extension units. Higher work is identified by a blue background, sometimes as part of the main text, sometimes as a separate spread. The books are supported by CD-ROMs called ActiveBook and ActiveTeach, which have digital interactive versions of the books

as well as a range of ICT resources. These resources also use the double-page spread format, with many photographs and illustrations as well as 'Have you ever wondered?' questions and learning outcomes on each spread.

Hodder Murray - by Chris Conoley, Mary Jones and David Sang. Edexcel endorsed. These resources consist of a student book for Science and Additional Science as well as teacher's books with CD-ROMs, homework books at 2 levels and worksheets and interactive presentations on CD-ROMs. The books are not limited to double-page spreads, but are fairly text heavy. Summaries, etc are not in separate boxes and higher level questions are only distinguished by a stripe in the margin.

OCR Gateway Science

Collins Education, series editor Chris Sherry. OCR endorsed.

There are books for each of Science and Additional Science, plus an additional book for the extension units for Physics, Chemistry and Biology. Differentiated "3-panel double spreads" are designed to enable all abilities to be taught using the same book. Information is crammed into every page, with key words forming a running feed across the bottom. There is also a Whiteboard Resources CD-ROM including Photorealistic Virtual Investigations and teacher support.

Heinemann from Harcourt, series editor Bob McDuell. OCR approved.

These books come in 2 levels for Science and Additional Science, as well as separate Physics, Chemistry and Biology texts. They are supported by Gateway Science Online. There is a 4-page spread format which allows for flexibility in the amount of text and pictures or diagrams on each page. They are attractively designed with 'How Science Works' integrated throughout the book.

Cambridge Gateway Sciences (Specification B). Author team includes: David Acaster, Mary Jones and David Sang

The series provides Science and Additional Science books, CD-ROM and online software.

WJEC Science suite

Hodder Murray – editor: Morton Jenkins. WJEC endorsed.

This single volume textbook (also available in Welsh) covers both Science and Additional Science and is accompanied by a CD-ROM of interactive presentations and online teacher's guide and worksheets.

For further details and opinions on the usefulness of individual books, see reviews in Physics Education – May and July editions.

There is also a very useful summary published in TES 02 June 2006 by Steven Chapman.

