

Revise for Edexcel GCSE Resistant Materials

Barry Lambert

Reviewed by Chris Snell

Consultant, Snell Eigendynamics

Revision strategy and explanation

This book deals with the examination paper structure and outlines the way in which questions test knowledge and understanding from AO1, 2 and 3 (Assessment Objectives listed in Edexcel’s Subject Specification booklet), for both Short course (SC) and Full course (FC).

There is advice in the form of Examiner’s Tips. For example the student is warned that simple one-word answers to the more valuable questions will not score many marks.

Tips draw attention to key words appearing in questions. Thus ‘give’, ‘state’ or ‘name’ would normally require a one- or two-word answer, at the most a short sentence. ‘Name the specific’ requires specific detail to be given. The book warns that generic answers such as ‘wood’ or ‘plastic’ will gain no marks. In this manner, the book goes on to describe the kinds of responses required from instructions to: ‘Describe’, ‘Explain’, ‘Use notes and sketches’, ‘Evaluate’ and so on.

Advice is clarified by use of specimen questions with exemplary answers, a practice continued throughout the book.

Assessment objective one

A section of approximately fifty pages, this deals with twenty four subject areas such as: materials processing; heat treatment of metals; components and fixings, glues and adhesives; choice and fitness for purpose; combining materials to improve properties; marking out; deforming processes; quality of manufacture; ICT and CAD/CAM in batch and volume production.

Each subject begins with a list of two or three **topics** which ‘You need to know’ or ‘be aware of’ or ‘Understand’, followed by **key points** dealing with the knowledge or process implied by the **topics**.

Assessment objective three – (AO2 is dealt with in section four)

A short section of seven pages dealing with how technology affects society and our own lives, and the impact of values and issues on design and manufacture.

Advice on design and product analysis questions

The opening **key points** section amplifies what will already be evident from the examining board’s literature, for example, the design questions on the foundation tier and higher tier will be different.

Under **design questions**, the student is reminded that two different, reliable and viable initial designs from a given specification are required. The section goes on to emphasise the application of knowledge and understanding gained from studying syllabus topics. Each of the latter is further defined by a comment, for example: ease of manufacture of your design.

A short list of bullet points follows, showing the kind of information given in each question, supported by examples of wording. Examples are accompanied by brief explanations to help the student identify important things to consider and include in an answer.

Examiner’s Tips follow, such as the need for both ideas in part (a) of a question to be technically different, rather than just, say, changing colour or shape.

Treatment of **product analysis questions** takes an approach similar to that for **design**, and tells the candidate that information about a commercially produced product has two parts, the first being an illustration and secondly, the additional data necessary to answer all part questions.

Comments

A page of opening comments titled ‘How to Improve Your Grade’, gives general advice and advice specific to the examination board and to the use of the book. This makes worthwhile reading for a student.

As the book is short at 85 pages, pupils may find it a more useful aid to revision than a standard text book, particularly so because most text books provide exercises

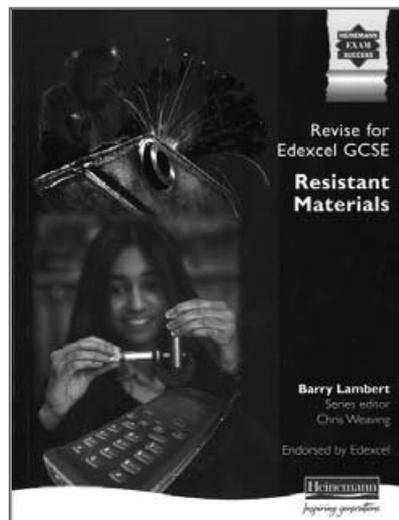
but few, if any, model answers. It is not a reference book, its strength lies in enabling candidates to immerse themselves in examination technique.

The benefit of feedback from comments on a marked examination script is supplemented by the advice contained in this book, except that the student receives it before the horse has bolted, so to speak!

Content is effectively communicated in terse language. Drawings are clear but the book relies mainly on narrative to get points across.

Teachers could use the book readily as a homework source, by setting questions that demand a reading of particular topics.

For the pupil serious about exam technique, this book provides useful insights.



Revise for Edexcel GCSE Resistant Materials

Barry Lambert

Appropriate content	✓✓✓	Generic use	←
Pupil/student use	✓✓✓	One of a series	←
Teacher resource	✓✓✓	Photocopiable	
Visuals	N/A	Pupil/student activities	N/A
Overall style	✓✓✓	Cross-curricular	

* Suitable for top KS3, most KS4 and some KS5

** Questions and activities at the end of each section. Examination questions at the end of the book.