

## **Teacher's notes**

This package has been written to support the teaching and learning of

- Edexcel examination board
- GCE 2008
- Design and Technology: Product Design (Graphic Products)
- AS Level 8GR01

The page numbers under the heading **Text Book** refer to the course text book that has been written specifically for this course

A Level Design and Technology for Edexcel  
Graphic Products Student Book  
Pearson  
978 0 435757 79 3

Similarly, the page numbers on the various web pages refer to the relevant pages in the same text book.

The page numbers under the heading **Specification** refer to the relevant pages in the Edexcel specification.

The course is intended to cover 26 weeks teaching time; 2 hours per week. As a guide, allow one week per topic, leaving some time for the mock examination and revision.

Note that topics

2 4 2 Graphical Communication  
2 4 3 Computer-generated graphics  
2 4 4 Modelling and prototyping  
2 4 6 Industrial and commercial processes

have been combined into one extended project.

The Revision questions and solutions are based on past papers from obsolete courses; they are of some value in the absence of any past papers for this new course. It is expected that students will only refer to the solutions, at the very bottom of each web page, coded red, after they have first attempted the questions. Teachers might wish to cut and paste the solutions to a separate file.

All documents are provided in Word format to facilitate editing, as well as PDF.

It is assumed that a related time budget of 26 weeks teaching time; 3 hours per week will be allocated to coursework. This package is not intended to support coursework, although Edexcel recommend that the Product Investigation coursework should be related directly to the teaching of the examination component of the course.

These time budgets are based on the assessment weighting of

40% examination  
60% coursework

**Design and Technology: Product Design  
Graphic Products**

**Course Overview**

This is the structure of the course, with comparison to the Edexcel GCSE Design and Technology courses:

Unit	Title	Assessment	Compared to GCSE
1	Portfolio of Creative Skills Coursework	60% AS 30% A2 Internal assessment	Design and Make coursework
2	Design and Technology in Practice	40% AS 20% A2 1h 30m examination	Examination paper
3	Designing for the Future	20% A2 2h examination	Examination paper
4	Commercial Design Synoptic Coursework	30% A2 Internal assessment	Design and Make coursework

Course Text Book for AS and A2	Revision Guide
A Level Design and Technology for Edexcel Graphic Products Student Book Pearson 978 0 435757 79 3	None published at the time of going to press

### Aims

- make use of tacit knowledge and reflective practices in order to work with tasks that are challenging and often require definition
- develop and sustain their creativity and innovative practice
- recognise and overcome challenges and constraints when working towards the production of high quality products
- develop a critical understanding of the influences of the processes and products of design and technological activities and from a contemporary and historical perspective
- draw on a range of skills and knowledge from other subject areas
- draw on and apply knowledge, understanding and skills of production processes to a range of design and technology
- activities

- develop an understanding of contemporary design and technology practices
- use digital technologies and information handling skills to enhance their design and technological capability.

## **Objectives**

- students should demonstrate specific knowledge and understanding and be able to apply that knowledge and understanding in combination with appropriate skills in their designing; and should communicate ideas and outcomes and demonstrate strategies for evaluation.
- students should be able to demonstrate and apply skills, knowledge and understanding of relevant materials, processes and techniques, and use materials and equipment to produce suitable and appropriate outcomes; and should communicate ideas and outcomes and demonstrate strategies for evaluation.

## **Unit 1 Portfolio of Creative Skills**

In this unit students are given the opportunity to develop their creative, technical and practical skills through a series of product investigation, design and manufacturing activities.

Students will produce **one** portfolio with **three** distinct sections which will demonstrate their creativity and flair when investigating, designing and making product(s). Ideally different products should be chosen for the **three** distinct sections as students are not being asked to carry out one large design and make exercise but three smaller and more focused tasks which build up to provide a detailed portfolio of their skills.

## **Unit 2 Design and Technology in Practice**

In this unit students will develop a knowledge and understanding of a wide range of materials and processes used in the field of design and technology. It is important for students, as designers, to learn about materials and processes so that they can develop a greater understanding of how products can be designed and manufactured.

Students will also learn about industrial and commercial practices, and the importance of quality checks and the health and safety issues that have to be considered at all times.

### **Unit 3 Designing for the Future**

In this unit students will develop their knowledge and understanding of a range of modern design and manufacturing practices and contemporary design issues. The modern designer must have a good working knowledge of the use of ICT and systems and control technology in the design and manufacture of products. They must also be aware of the important contributions of designers from the past which may provide inspiration for future design.

It is increasingly important that students develop an awareness of the impact of design and technological activities on the environment. Sustainable product design is a key feature of modern design practices.

### **Unit 4 Commercial Design**

In this unit students are given the opportunity to apply the skills they have acquired and developed throughout this course of study, to design and make a product of their choice that comply with the requirements of a graphic product.

In order to reach high attainment levels, students must adopt a commercial design approach to their work, reflecting how a professional designer might deal with a design problem and its resolution.

The choice of design problem should have a real commercial use, in that it should be useful to a wider range of users beyond an individual, unless it has been specifically commissioned as a 'one-off'. The design problem should provide opportunities for a client or user-group to have input into decision making at various stages of the design and make process.

A client or user group is defined as any third party identified by a student, that is referred to and who can give informed critical feedback at various stages throughout the design process. Clients and user-groups do not need to be specialists or experts; they can be drawn from any relevant group of people and may include other students, friends or family members.

A key feature of this unit is that students consider issues related to sustainability and the impact their product may have on the environment. A student may choose to design and make a sustainable product, but if they do not, they should still consider the issues of sustainability at relevant points in their designing and making activities. Sustainable issues include materials production and selection, manufacturing processes, use of the product and its disposal/recycling.

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