	Edexcel use only

ADVANCED (A2) GCE DESIGN AND TECHNOLOGY: PRODUCT DESIGN

(First examination from summer 2010)

CENTRES MUST FOLLOW ALL INSTRUCTIONS GIVEN IN THIS DOCUMENT. FAILURE TO DO SO COULD RESULT IN LATE RETURN OF RESULTS.

Unit Code *Please refer to page 2*	
Candidate Name	
Candidate Number	
Centre Name	
Centre Number	
Year of Examination	

Edexcel Advanced (A2) GCE in Design and Technology:

- **Resistant Material Technology**
- **Graphic Products**

Coursework Assessment Booklet (CAB) from Summer 2010 onwards

This document is a key tool in the assessment of coursework for Design and Technology: Product Design –

- Resistant Materials Technology
- Graphic Products

Please ensure that you follow all the procedures outlined in this booklet.

Unit code checklist for A2 coursework

Unit		Unit Code
Product Design: Resistant Materials Technology	Unit 4: Commercial Design	6RM04
Product Design: Graphics Products	Unit 4: Commercial Design	6GR04

Coursework submission

- The teacher responsible for overseeing the candidate's work must ensure that a separate CAB is completed for each candidate.

- The coursework folder and CAB for each candidate in the sample must be sent by the date published in the GCE timetable and information manual. This date will normally be in early May of each examination year.

- Please see the "INSTRUCTION FOR COMPLETION AND SAMPLING" notes on the back of the OPTEMS for further details.

Front Cover

- Please enter the unit code, candidate name, candidate number, centre name, centre number and year of examination on the front cover.

Coursework details

- Candidate and teacher **must** authenticate the work submitted by completing the appropriate sections on page 13.

Photographic evidence of completed outcomes

- Photographic evidence of completed outcome(s) for the Product Manufacture section **must** be attached to each CAB. The outcomes must be clearly labelled with the candidate name, candidate number, centre name, centre number and unit code before being photographed. The quality of the photography **must** be sufficient to enable moderators to see the completed project clearly and in detail.

Teacher annotation

- Each CAB should include teacher annotation indicating where the marks for each assessment criterion have been awarded, this should be page referenced to the student's folder.

Assessment criteria grid

- Enter one mark for each criterion. Fill in the totals where indicated on pages 5, 7, and 9 and 11.

- The levels of response are indicators of what to expect and must be considered as a framework rather than as absolute. Therefore candidates should not be penalised for omitting some aspect of a given level if in all other respects their response is excellent.

Assessment criteria grid

Product Investigation

Assessment criteria	Level of response
A. Research and analysis	Analysis is detailed with most design needs clarified. Research is selective and focuses on the needs identified in the analysis
	Analysis is limited with some design needs clarified. Research is superficial and does not focus on the needs identified in the analysis.
B. Product specification	Specification points are realistic, technical and measurable. Specification fully justifies points developed from research in consultation with client/user-group. Sustainability of resources is realistically considered and relevant when developing specification points.
	Specification points are realistic but not measurable. Some specification points are developed from research in limited consultation with a client user-group, but are not justified. Sustainability of resources is considered superficially when developing specification points.
C. Design and development - Design	Present alternative ideas that are realistic, workable and detailed. Ideas demonstrate detailed understanding of materials, processes and techniques supported by research information. Ideas address all specification points. Client/user-group feedback shown.
	Present alternative design ideas that are realistic and workable. Ideas are detailed and use relevant research. Ideas address most specification points.
	Present alternative design ideas that are similar and simplistic. Ideas are similar and are use limited research. Limited specification points are addressed.
C. Design and development - Review	Present objective evaluative comments against most specification points that are consider client/user-group feedback. Evaluative comments include realistic issues of sustainability relating to design and resources.
	Present general and subjective comments against some specification points. An aspect of sustainability is evaluated superficially.

TEACHER ANNOTATION		MARK RANGE	TEACHER MARK	EDEXCEL USE ONLY
Evidence found on page(s)	**Comments**			
		3-4		
		1-2		
		4-6		
		1-3		
		7-10		
		4-6		
		1-3		
		3-4		
		1-2		

Assessment criteria	Level of response
C. Design and development - Develop	Development is used to produce a final design proposal that is significantly different and improved compared to any previous alternative design ideas. A final design proposal is presented that includes technical details of materials and/or components, processes and techniques. Modelling to scale using traditional materials or 2D and/or 3D computer simulations is used to test important aspects of the final design proposal against relevant design criteria. Client/user-group feedback is used for final modifications.
	Developments are appropriate and use details from alternative design ideas to change, refine and improve the final design proposal. A final design proposal is presented that includes some details of materials, and/or components, processes and techniques. Modelling using traditional materials is used to test some aspects of the final design proposal against relevant design criteria.
	Developments from alternative design ideas are minor and cosmetic. A final design proposal is presented that includes some details of materials and/or components, processes and techniques. Simple modelling is used to test an aspect of the final design proposal against a design criterion.
C. Design and development - Communicate	Use a range of communication techniques and media, including ICT and CAD, that are carried out with precision and accuracy to convey enough detailed and comprehensive information to enable third-party manufacture of the final design proposal.
	Use a range of communication techniques, including ICT, that are carried out with sufficient skill to convey an understanding of design and develop intentions and construction details of the final design proposal.
D. Planning	Produce a detailed production plan that considers the main stages of manufacture in the correct sequence appropriate to the scale of production. Realistic and achievable time-scales and deadlines are evidenced for the scale of production. Quality and safety checks are shown and justified.
	Produce a production plan that considers the main stages of manufacture. Reference to time and scale of production is shown. Quality and safety are evidenced superficially.

TEACHER ANNOTATION		MARK RANGE	TEACHER MARK	EDEXCEL USE ONLY
Evidence found on page(s)	**Comments**			
		7-10		
		4-6		
		1-3		
		4-6		
		1-3		
		4-6		
		1-3		

Assessment criteria	Level of response
E. Making – Use of tools and equipment	Select tools and equipment for specific uses independently. Use with precision and accuracy. High level of safety awareness, for self and others, when using specific tools and equipment.
	Select appropriate tools and equipment with some guidance. Use with some skill and attention to detail. Show sufficient levels of safety awareness, for self and others, when using specific tools and equipment.
	Select general tools and equipment with guidance. Use with limited skill and attention to detail. Show a limited level of safety awareness, for self and others, when using specific tools and equipment.
E. Making - Quality	Display a detailed understanding of the working properties of materials used with justification for their selection. Display a justified understanding of the use of manufacturing processes. Produce a high-quality product that matches all aspects of the final design proposal and functions fully.
	Display a good understanding of the working properties of materials used with relevant reasons for their selection. Display a good understanding of the use of relevant manufacturing processes. Produce a product that matches the final design proposal and functions adequately.
	Display a limited understanding of the working properties of materials used with limited reasoning for their selection. Display a limited understanding of the use of manufacturing processes. Produce a product that barely matches the final design proposal and functions poorly.
E. Making – Complexity/ level of demand	The complexity of task is challenging. A wide range of skills is required, demonstrating precision and accuracy in their use.
	The complexity of task offers some challenge. A range of skills is required, demonstrating attention to detail in their use.
	The complexity of task is undemanding. A limited range of skills is needed that require little attention to detail in their use.

TEACHER ANNOTATION		MARK RANGE	TEACHER MARK	EDEXCEL USE ONLY
Evidence found on page(s)	Comments			
		7-9		
		4-6		
		1-3		
		11-16		
		6-10		
		1-5		
		7-9		
		4-6		
		1-3		

Assessment criteria	Level of response
F. Testing and Evaluating	A range of tests justified and carried out to check the performance and/or quality of the final product. Objective evaluative comments, including third-party evaluation, consider most relevant, measurable specification points in detail. Suggestions for modification that are justified from tests carried out focus on improving performance and/or quality of the final product. Relevant and useful life cycle assessment carried out on the final product to check its sustainability.
	A range of tests carried out to check the performance and/or quality of the final product. Evaluate comments are objective and reference most specification points. Suggestions for modification are relevant and are justified from tests that were carried out.
	One or more simple tests carried out to check the performance and/ or quality of the final product. Evaluative comments are subjective and reference a few specification points superficially. Suggestions for modifications are cosmetic.

TEACHER ANNOTATION		MARK RANGE	TEACHER MARK	EDEXCEL USE ONLY
Evidence found on page(s)	**Comments**			
		7-10		
		4-6		
		1-3		
	OVERALL TOTAL	**MAX. MARK**	**TEACHER MARK**	**EDEXCEL USE ONLY**
		90		

Photographic evidence for the coursework outcome

(A maximum of three photographs must be submitted)

Please complete the following:

Design Brief:	
Client /User group	

Please refer to the instructions on page 2.

Sources of Assistance Use this box to give details of any sources of assistance used in completion of the coursework described in this booklet other than the normal practical assistance given in school and college environments.

Candidate's Declaration			
I certify that the coursework submitted is my own work; that it has not previously been submitted for any other level of examination and that all sources of assistance that have been used are acknowledged in the box above.			
Signature of Candidate		Date	

Teacher's Declaration			
I certify that the candidate named on the booklet completed coursework submitted and that it has not previously been submitted for any other level of examination.			
Signature of Teacher		Date	

By signing the above declaration you agree to your coursework being used to support Professional Development, Online Support and training of both Centre-Assessor and Edexcel Moderators and to be used as an exemplar piece of work. If you have any concerns regarding this please contact d&t@edexcel.com.