

Design and Technology

General Certificate of Secondary Education

Unit **A552**: Product Design

Mark Scheme for June 2012

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Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Development of Design Evolution through making	Initial Thoughts	Limited outline of initial thoughts. Work is predictable/non creative	1	Outlines initial thoughts giving some detail, work shows some potential	1	Clearly outlines initial thoughts giving detail. Ideas show potential /some creative elements.	1	Clearly outlines initial thoughts giving detail. Initial thoughts show creative thinking	1	0
	Brief	Possible briefs are clear	1	Final design brief has scope for creativity	1					1
	Use/ clients/ users	Intended user(s) and/or client(s) is identified	1	User requirements are positively reflected within design work	1					2
	Specification	Specification is vague/generic. Points based upon 'given' information.	1	Specification gives some basic requirements for product	1	Specification is detailed key features of the product are identified.	1			3
	Ideas	Very limited / predictable idea/s	1	Range of ideas that respond to the brief/specification	1	Ideas show some detail	1	Ideas show detail of most aspects of the design	1	4
		Some evidence of creative thinking	1	Creative thinking expands ideas	1	Ideas are innovative (inventive, original, novel)	1	Details of construction or materials given	1	5
	Response to Design Problem	Limited consideration or response to given design problem	1	Design problem considered/addressed	1	Design problem fully considered/addressed	1			6
									7	
									8	
Communicating information through sketches, writing and photographs	Quality of Communication Skills	Use of sketches/images is limited	1	Use of sketches/images is satisfactory	1	Use of sketches/images is good	1	Uses a variety of techniques to enhance design communication e.g. rendering, swatch	1	0
		Written communication (clarity of message) is limited	1	Written communication is satisfactory	1	Written communication is good	1	Written communication is clear and succinct. Technical vocabulary is used	1	1
									2	
									3	
									4	
									5	
									6	
									7	
									8	
Materials, Components, Processes, Techniques, and Industrial practice	Material Selection	Choice of materials and components limited	1	Considered choice of materials and components	1	Appropriate joining methods identified/detailed	1			0
	Use of Material	Use of materials restricted to basic constructions, structures or experiments	1	Some adept use of materials but with inconsistencies.	1	Adept use of materials	1	Making skills demonstrate a range of techniques/ complexity	1	1
	Making Skills	Product modelling attempted - may be incomplete	1	Model mainly complete with reasonable standard of making skills evidenced	1	Model complete with good standard of making skills demonstrating accuracy	1	Model(s) complete with a high standard of making skills	1	2
		Model reflects most aspects of the developed design	1	Model accurately reflects all features of the developed design	1	Reviews manufacturing progress, producing clear plans for next stage of	1			3
									4	
									5	
									6	
									7	
									8	
									9	
									10	

						making				11 12 13 14
Analysis of ideas, models and prototypes	Analysis and Evaluation	Analysis and evaluation limited	1	Analysis and evaluation satisfactory. Evident throughout design work and in box 17 and 18	1	Analysis and evaluation good. Some justification given. Information given about future product.	1	Justified analysis and evaluation throughout Suggested Improvements identified and/or use of technical terminology.	1	0 1 2 3 4
	Peer Evaluation	Limited Plan and recording of feedback for reflect & record activity	1	Clear plan for reflect and record. Records peer feedback and possible modifications	1					5 6 7
	Development of ideas	Shows some development of ideas from 'initial thoughts' Box 1 to 5	1	Shows clear development. Initial thoughts have been expanded. Box 1 to 5	1	Shows some discrimination between good and poor ideas	1	Explains rejection of ideas in favour of ones that are worthy of further development	1	8 9 10 11
						Clear evidence of development of ideas. Some design issues unresolved.	1	Fully develops ideas. No outstanding design issues	1	12
	Reflection	Reflection	Basic comments / observations relating to the product design.	1	Reflection focuses on 'design issues' specific strengths and weaknesses identified	1		Quality analysis/creative design improvements suggested	1	0 1 2 3 4
		Alterations/refinements to the 'design' are specified/suggested			1					

- Check ringed marks and totals for each section.
- Check transfer of marks to front of workbook and check total.
- Check transfer of total to MS1 and sign rear of MS1.

I have completed the checks detailed.

Checkers Signature _____

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