

Design and Technology

General Certificate of Secondary Education

Unit **A552**: Product Design

Mark Scheme for January 2011

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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	Work is predictable/non creative	1	Work shows potential/some elements of creativity	1	Creative thinking expands ideas which show potential but is not always fully realised	1	Initial thoughts are creative showing unexpected ways of thinking	1	0	
										1	
										2	
										3	
										4	
	Brief	Possible briefs are narrow	1	Final design brief has scope for creativity	1						5
	Use/ clients/ users	Intended user(s) and/or client(s) is considered	1	User requirements are positively reflected within design work	1						6
											7
										8	
										9	
										10	
Specification	Specification is vague/generic. Points based upon 'given' information.	1	Specification gives some detailed requirements for product	1	Specification is detailed key features of the product are identified.	1				11	
										12	
										13	
										14	
										15	
Ideas	Very limited / predictable idea/s	1	Range of ideas that respond to the brief/specification	1	Ideas show detail	1	Ideas fully explained	1		16	
										17	
	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		18	
										19	
										20	
										21	
										22	
Response to Design Problem	Limited consideration or response to given design problem	1	Design problem considered/addressed	1	Design problem fully considered/addressed	1					

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 1 2 3 4
		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	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 1 2 3 4
		Use of Material	1	Some adept use of materials but with inconsistencies.	1	Adept use of materials	1	Creative use of Materials	1	5 6 7 8
	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	9 10 11 12 13
		Model accurately reflects design	1	Reviews manufacturing progress, producing clear plans for next stage of making	1	Making skills demonstrate a range of techniques/complexity	1			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. Clear information given about future product.	1	Detailed analysis and evaluation with justification. Suggested Improvements/Use of technical terminology	1	0
										1
										2
										3
										4
										5
	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					6
										7
										8
										9
										10
	Development of ideas	Shows some development of ideas from 'initial thoughts'	1	Shows clear development. Initial thoughts have been expanded.	1	Shows clear discrimination between good and poor ideas	1	Explains rejection of ideas in favour of ones that are worthy of further development	1	11
						Clear evidence of development of ideas	1	Fully develops ideas. No outstanding design issues	1	12
Reflection	Reflection	Basic comments / observations. May relate to 'model' only	1	Reflection focuses on 'design issues' specific strengths and weaknesses identified	1		1	Quality analysis/creative design improvements suggested	1	0
				Alterations/refinements to the 'design' are specified/suggested		1				1
										2
										3
										4

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