OCR
RECOGNISING ACHIEVEMENT

GCSE

Design and Technology

General Certificate of Secondary Education

Unit **A552:** Product Design

Mark Scheme for June 2013

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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 1 2 3 4 5 6 7 8 9 10 11 12
	Brief	Three clear problems/briefs	1	Final design brief has scope for creativity	1					
	Use/ clients/ users	Intended user(s) and/or client(s) are identified	1	User requirements are positively reflected within design work	1					
	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			
	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	13 14 15 16 17 18
		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	
	Response to Design Problem	Limited consideration or response to given design problem	1	Design problem considered/addressed	1	Design problem fully considered/addressed	1			19 20 21 22
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 5 6 7 8
		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	
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 5 6 7 8 9 10 11 12 13 14
	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	
	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	
		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 making	1			
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 and18	1	Analysis and evaluation good**.** **Some** justification given. Information given about future product.	1	Analysis and evaluation good throughout with justification. Suggested Improvements identified and/or use of technical terminology.	1	0 1 2 3 4 5 6 7 8 9 10 11 12
	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					
	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	
						Clear evidence of development of ideas Box 5 – 9	1	Fully develops ideas. Few outstanding design issues	1	
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			

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