































Component 2:
















GCSE Design and Technology: Product Design (Timbers)

Learner			
Target		KS4 Target	

Design and Make project	Page contents	Peer Assessment	Completed? Y/N
1.1 Investigation of needs and research	1. Exploring the Context		
	2. Design brief and problem analysis		
	3. Mood board		
	4. Product Analysis A		
	5. Product Analysis B		
	6. Relevant research – materials		
1.2 Specification	6. Product Specification		
2.1 Design ideas	6. Initial design idea concepts		
2.2 Review of Design ideas	7. Initial design ideas reviews against context and specification		
2.3 Development of chosen ideas into a chosen design	8. Initial development of an idea		
	9. Construction development		
	10. CAD development		
	11. Model development		
2.4 Communication	Not a page: Assessment made by assessor on appropriate use of techniques to communicate design ideas and development		
2.5 Review of chosen idea	12. Final design solution provided with a review against context and specification		
3.1a/b/c Manufacture	13. Planning for manufacture		
	14. Diary of manufacturing		
	Not a page: Manufacture skills and processes, Quality and accuracy Produce a prototype that demonstrates fully competent making skills. Fully competent use of tools and equipment and techniques. Demonstrates a sustained high degree of safe working practice.		
4.0 Evaluate	15. Testing and evaluation		

Learner			
Target		Aspirational Target	

CORE CONTENT			
Unit	Subject category	Done	Unit topic knowledge
1.1	The impact of new and emerging technologies		
1.2	How the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment		   <input type="checkbox"/>
1.3	How energy is generated and stored in order to choose and use appropriate sources to make products and power systems		   <input type="checkbox"/>
1.4	Developments in modern and smart materials, composite materials and technical textiles		
1.5	The functions of mechanical devices used to produce different sorts of movements, including the changing of magnitude and the direction of forces		
1.6	How electronic systems provide functionality to products and processes, including sensors and control devices to respond to a variety of inputs, and devices to produce a range of outputs		   <input type="checkbox"/>
1.7	The use of programmable components to embed functionality into products in order to enhance and customise their operation		
1.8	The categorisation of the types, properties and structure of ferrous and non-ferrous metals		   <input type="checkbox"/>
1.9	The categorisation of the types, properties and structure of papers and boards		   <input type="checkbox"/>
1.10	The categorisation of the types, properties and structure of thermoforming and thermosetting polymers		
1.11	The categorisation of the types, properties and structure of natural, synthetic, blended and mixed fibres, and woven, non-woven and knitted textiles		   <input type="checkbox"/>
1.12	The categorisation of the types, properties and structure of natural and manufactured timbers		   <input type="checkbox"/>
1.13	All design and technological practice takes place within contexts which inform outcomes		
1.14	Investigate environmental, social and economic challenges when identifying opportunities and constraints that influence the processes of designing and making		
1.15.1	Investigate and analyse the work of past and present professionals and companies in order to inform design		   <input type="checkbox"/>
1.15.2	Investigate and analyse the work of past and present professionals and companies in order to inform design (1.15.2)		   <input type="checkbox"/>
1.16	Use different design strategies to generate initial ideas and avoid design fixation		
1.17	Develop, communicate, record and justify design ideas, applying suitable techniques		   <input type="checkbox"/>

GRAPHICS SPECIALIST MATERIAL AREA -			
Unit	Subject category	Done	Unit topic knowledge
3.1	Design contexts		
3.2	The sources, origins, physical and working properties of papers and boards and their social and ecological footprint		   <input type="checkbox"/>
3.3	The way in which the selection of papers and boards is influenced		   <input type="checkbox"/>
3.4	The impact of forces and stresses on papers and boards and how they can be reinforced and stiffened		
3.5	Stock forms, types and sizes in order to calculate and determine the quantity of papers and boards required		   <input type="checkbox"/>
3.6	Alternative processes that can be used to manufacture paper and board products to different scales of production		   <input type="checkbox"/>
3.7	Specialist techniques, tools, equipment and processes that can be used to shape, fabricate, construct and assemble a high-quality paper and board prototype		
3.8	Appropriate surface treatments and finishes that can be applied to papers and boards for functional and aesthetic purposes		   <input type="checkbox"/>

Mock exam results				Synoptic testing			
	Title / Date	Score	Grade	Unit test	Grade	Unit test	Grade
1				1.1 / 1.2 / 1.3		1.13 / 1.14 / 1.15	
2				1.4 / 1.5 / 1.6		1.16 / 1.17	
3				1.7 / 1.8 / 1.9		3.1 / 3.2 / 3.3 / 3.4	
4				1.10 / 1.11 / 1.12		3.5 / 3.6 / 3.7 / 3.8	

