Year 10

Theory lessons: One hour per week

Timing	Unit Title	Overview	Knowledge	Assessing Understanding
Autumn 1	Workshop	To manufacture a wood-based product	How to use the following tools and equipment	End of unit test
	familiarisation	to an engineering drawing	safely:	Section B: Specialist materials
	(RM Only)		 Drilling machine, drill bits and Forstner bits. 	
			Belt sander.	
			 Mallet and chisel. 	
			 Tenon saw. 	
			Coping saw.	
	Specialist	Introduction to specialist materials	Section B	
	materials 1	 Graphics: Papers and boards 	For the specialist material:	
		 RM: Timber based materials 	 Types and their physical and working 	
			properties.	
			 How to shape and form using cutting, 	
			abrasion and addition.	
			 How to use tools, equipment and processes 	
			to shape, fabricate, construct and assemble	
			high quality prototypes safely and with skill.	
			 Commercial processes. 	
			 The main source and the processes involved 	
			in converting it into a workable form.	
			 Stock forms and bought in components. 	
			 Surface treatments and finishes as well 	
			including preparation and application.	

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Autumn 2	Specialist materials 2	Continue to develop knowledge of specialist materials: Graphics: Papers and boards RM: Timber based materials	Section B:	Exam style questions
Spring 1	New and emerging technologies	Develop knowledge and understanding of the impact of new and emerging technologies on commercial practice and society.	Section A Industry Enterprise People Culture Society Production techniques and systems Design decisions Section B Scales of production Section C The work of others: Apple	End of unit test New and emerging technologies and specialist materials.

Spring 2	The environment Develop knowledge and understanding of a range of environmental issues.			End of Year exam
		Section A		
		 Sustainability 		
		 Fossil fuels 		
		 Nuclear power 		
		 Renewable energy 		
		 Energy storage systems including 		
		 Alkaline and rechargeable 		
		 Kinetic pumped storage s 		
		Section B		
		 Ecological and social footprint 		
		Section C		
Summer 1		The work of others: Primark and to		
Summer 2	Materials: Core	Develop a basic knowledge of materials	Section A	Exam style questions
		beyond the area of specialism	Classification, properties and uses of materials	
			within the following groups:	
			 Metals and alloys. 	
			Polymers.	
			Textiles.	
			 Timber based materials (Graphics only). 	
			 Papers and boards (RM only). 	

Design & Make Project / NEA Lesson: One hour per week

Timing	Unit Title	Overview	Knowledge & Skills	Assessing Understanding
Autumn 1 to Summer 1	Design and make RM: Lighting- In style of a one of the following designers: • Aljoud Lootah • Ettore Sottsass • Kusheda Mensah • Karim Rashid Graphics: Souvenir for an exhibition	A design and make project to develop:	To develop the following skills: Context Analysis Research into and analysis of the work of others Writing a design brief and a well justified specification Generation of design ideas Communication of design ideas Development through modelling Development through testing and trialling Generating final drawings Manufacturing in the specialist material Analysis and evaluation	Assessment of the design and make project against relevant NEA criteria
Summer 2	Non-exam assessment (NEA) 50% of GCSE	NEA Sections A & B	 Context analysis Research into client wants and needs Research into the work of others Analysis and evaluation of research Concluding research findings Using research findings to inform a concise design brief and well justified design specification. 	NEA assessment criteria