

Autumn 2	Specialist materials 2	Continue to develop knowledge of specialist materials: <ul style="list-style-type: none"> ● Graphics: Papers and boards ● RM: Timber based materials 	Section B: <ul style="list-style-type: none"> ● Material management. ● Quality control. ● Tolerances. ● Waste. ● Jigs. ● Modifications of properties. ● Forces and stresses. Section C: <ul style="list-style-type: none"> ● Selection of materials or components / product analysis. 	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 <ul style="list-style-type: none"> ● Industry ● Enterprise ● People ● Culture ● Society ● Production techniques and systems ● Design decisions Section B <ul style="list-style-type: none"> ● Scales of production Section C <ul style="list-style-type: none"> ● 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
Summer 1		<p>Section A</p> <ul style="list-style-type: none"> ● Sustainability ● Fossil fuels ● Nuclear power ● Renewable energy ● Energy storage systems including: <ul style="list-style-type: none"> ○ Alkaline and rechargeable batteries ○ Kinetic pumped storage systems <p>Section B</p> <ul style="list-style-type: none"> ● Ecological and social footprint <p>Section C</p> <ul style="list-style-type: none"> ● The work of others: Primark and the environment 		
Summer 2	Materials: Core	Develop a basic knowledge of materials beyond the area of specialism	<p>Section A</p> <p>Classification, properties and uses of materials within the following groups:</p> <ul style="list-style-type: none"> ● Metals and alloys. ● Polymers. ● Textiles. ● Timber based materials (Graphics only). ● Papers and boards (RM only). 	Exam style questions

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: <ul style="list-style-type: none"> ● Aljoud Lootah ● Ettore Sottsass ● Kusheda Mensah ● Karim Rashid Graphics: Souvenir for an exhibition	A design and make project to develop: <ul style="list-style-type: none"> ● Designing skills ● Manufacturing skills ● Familiarity with the NEA criteria. 	To develop the following skills: <ul style="list-style-type: none"> ● 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 <ul style="list-style-type: none"> ● 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