Design & Technology - Product Design Curriculum Long Term Planning

		Term 1	Term 2	Term 3
Year 10	Big Idea	Skills Development & Lamp Project Theory: Design and technology and our world. Materials, Smart materials, composites and technical textiles	Camping Chair Project Theory: Electronic systems and programmable components, Mechanical components and devices, In-depth knowledge and understanding of timbers	Bird Box Design & NEA Theory: Designing and making principles
	Key Knowledge and skills	HT1 – Skills Development Wood Joints Half lap joint, Dove tail, Mortise & Tenon, Finger joints Mitre joint Processes Router, Lathe, Steam bending, Joining method HT2 – Lamp Project – AO2 & AO3 Skills applied to project on Timbre, electronics and 2D design pattern repeats One theory lesson a week – AO4 HT1 - Production methods, sustainability, social issues, products in society, renewable and non-renewable powering systems. HT2 - Different materials	Mock NEA – AO1,AO2,AO3 Camping chair project that follows the design process, to model a prototype design, improving the product into a final outcome made from timber and introducing textiles as a storage product for the camping chair. One theory lesson a week – AO4 HT3 – Electronic systems, components, programmable micro bits, mechanical systems, pulley systems, gears, levers and linkages, CAMS and followers. HT2 - Different materials HT4 – Sources of timber, properties, social issues, stock forms, finishes, specialist technologies.	**Bird Box Design Task – AO2** Project that focusses on the design process and drawing skills using sketching, orthographic, tinker CAD. June 1st – NEA briefs released by exam board. 1. Identifying and investigating design possibilities. 2. Developing a design brief and specification. Exam briefs reviesed and introduced to pupils. Design process followed: Analysis Design brief Research – product analysis, environment research Final brief & Specification **One theory lesson a week – AO4** HT5 – Drawing skills Perspective, orthographic drawing.
	End Point	Completed lamp product, teacher assessment on skills demonstrated in the final product. End of unit assessment tests unit 1 & unit 2	Sketchbook and final outcome assessed against the needs of a client. End of unit assessment tests unit 3 & unit 4 Mock Exam – Focus on 4 units covered	NEA – Contextual Challenge assessment criteria 1&2 End of unit assessment unit 5
Year	Big Idea	NEA	NEA	Exam Revision

	Key Knowledge and skills	3. Generating and developing design ideas. 4. Manufacturing a prototype. Design Ideas Tinker CAD model/Card prototypes	4. Manufacturing a prototype. 5. Analysing and evaluating design decisions and prototypes	Recap all key knowledge learnt in YR10 1 – Design and technology and our world 2 – Smart materials, composites and technical textiles 3 – Electronic systems and programmable components 4 – Mechanical components and devices 5 – Materials 6 – In-depth knowledge and understanding of timbers 7 – Designing and making principles Gaps in assessment to direct topics covered.
	End Point	NEA - Written sketchbook including photographic evidence of the skills tested in the design of the product. Mock Exam June 2026	NEA - Written sketchbook including photographic evidence of the skills tested in the design of the product. Final product completed, analysed, evaluated and redesign. NEA to be completed by Easter break	NEA– Marked and centre marks inputted by May Final Examination June27