

What are the aims and intentions of this curriculum?

To develop a personal response to an externally set brief for the NEA. To apply knowledge of materials and processes within the DT workshops to create accurate, working prototypes in response to the NEA brief. To apply a high standard of sketching, CAD CAM development, research, analysis, and evaluation skills whilst documenting their NEA. To prepare students in core technical principles, specialist technical principles, and designing and making principles (polymers, metals and timbers) in preparation for the exam unit.

Term	Topics	Knowledge covered	Skills developed	Assessment
Autumn 1	NEA - 2 lessons a week Exam Prep - 1 lesson a week	Investigation of existing products. Primary and secondary research Specification. Creating design solutions. Materials, sources & origins, environment, ecological & social footprint, ergonomics & anthropometrics	Analysis and evaluation of materials, products and processes. Justifying opinion. Independent work. Practise exam style questions. Structuring 8+ mark questions.	
Autumn 2	NEA - 2 lessons a week Exam Prep - 1 lesson a week	Developing design solutions - sketching, modelling, CAD CAM Planning manufacture Manufacturing prototypes Evaluating final prototypes. Modern materials, Mechanical devices, Forces and stresses, sources & origins	CAD skills CAM programming and setup. Time planning Practical skills. Self evaluation and reflection - modifying designs and models. Practise exam style questions. Structuring 8+ mark questions.	Mock exam
Spring 1	NEA Exam preparation	Self assessment of NEA task. Using and working with materials. Stock forms, scales of production, specialist techniques and processes, surface treatments and finishes.	Independent reflection - self assessment of NEA. Practise exam style questions. Structuring 8+ mark questions.	Mock exam
Spring 2	Exam preparation - designing and making principles.	Environmental, social and economic challenge. Designers and design movements. Design strategies. Communication of design ideas. Tolerances.	Practise exam style questions. Structuring 8+ mark questions.	Written assessments - past papers/exam style questions.
Summer 1		Recap of topics through practice multiple choice questions. Understanding key phrases in exam questions. Developing longer answer questions.	Practise exam style questions. Structuring 8+ mark questions.	Written assessments - past papers/exam style questions.
Summer 2				GCSE Exam.