KS4 CURRICULUM: Product Design (Resistant Materials + Graphic Products) (Year 11)

Overview

In Product Design (Resistant Materials and Graphic Products) you will learn about:

- Core design and technology principles with some emphasis on maths and science skills
- In-depth knowledge of how different materials and manufacturing processes are used to design and make products

	Focus / Topic	Knowledge & Skills	Assessment
Autumn 1	Contextual challenge: Design Thinking	● Specification ● Initial Ideas ● Review of initial ideas ● Review of Online Learning Summer Term 2020 ● Develop an experienced understanding of an iterative design process and the relevance of these to industry practice ● Develop realistic design proposals as a result of the exploration of design opportunities and users' (and stakeholders) needs, wants and values	● Maths formative assessment homework on Google classroom NEA Deadline: Explore (AO1) 1.1 to 1.6 Create DT (A02) 2.1 2/10/25
Autumn 2	Contextual challenge: Design Thinking	● Development of design ideas into a chosen design ● Develop realistic design proposals as a result of the exploration of design opportunities and users' (and stakeholders) needs, wants and values ● Communication of design ideas ● Communicate their design ideas and decisions using different media and techniques, as appropriate for different audiences at key points in their designing ● Review of chosen design ● Design Proposal ● New and Emerging Technologies (Cont.)	● Maths formative assessment homework on Google classroom NEA Deadline: Create DT (A02) 2.2 to 2.4 Create DC (A03) 3.1 to 3.4 15/12/25

Spring 1	Contextual challenge: Create	Manufacture ● Develop decision making skills, including the planning and organisation of time and resources when managing their own project work ● Develop a broad knowledge of materials, components and technologies and practical skills to develop high quality, imaginative and functional prototypes ● Selection of materials ● Skills and processes ● Quality control and quality assurance	● Maths formative assessment test on Google classroom NEA Deadline Create FP (A04) 4.1 to 4.5 9/2/26
Spring 2	Contextual challenge Evaluate	Testing and Evaluation ● Develop the skills to critique and refine their own ideas whilst designing and making ● become independent and critical thinkers who can adapt their technical knowledge and understanding to different design situations	● Maths formative assessment homework on Google classroom NEA Deadline Evaluate (A05) 5.1 to 5.4 1/3/26 Responding to feedback and final submission 2 weeks later 15/3/26
Summer 1	Exam	Revision techniques ● Use key Design and Technology terminology including those related to: designing, innovation and communication; materials and technologies; making, manufacture and production; critiquing, values and ethics	
Summer 2	Study leave	Revision techniques	● Final GCSE Exam (May/June 2026)

Further Information

- Design and Technology - Component 1: Written paper (100 Marks - 2 Hours) (50% of GCSE 9-1)
- Iterative Design Challenge - Component 2: Non-exam Assessment (100 Marks - Approx. 40 hours) (50% of GCSE 9-1)