

# DT (PRODUCT DESIGN)

# STATEMENT OF AIMS

## THE AIM OF THE KS4 CURRICULUM IS TO DEVELOP...

### SUCCESSFUL LEARNERS

Learners develop their creativity, practical skills and technical knowledge through the design and manufacture of innovative products. They investigate real-world problems, carry out research, test ideas and evaluate their work to improve outcomes. Through independent learning, resilience and problem-solving, students gain the confidence and skills needed for further study and future careers in design, engineering and manufacturing.

### CONFIDENT, INSPIRED INDIVIDUALS

Learners express their creativity and turning ideas into practical solutions. They build confidence through designing, making and evaluating products, learning from both successes and challenges. By exploring innovative designs, new technologies and real-world applications, students are inspired to think creatively, develop resilience and pursue future opportunities in design, engineering and related industries.

### ASPIRING, RESPONSIBLE CITIZENS

Learners consider the social, environmental and ethical impact of the products they design and make. They learn the importance of sustainability, responsible sourcing of materials and designing for a diverse range of users. Through creative problem-solving and informed decision-making, students develop the skills and values needed to contribute positively to their communities and the wider world.

## CURRICULUM MAP

## KS4

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Y10	<p><i>Theory</i>                      Unit 01 - Core Principals                      New and Emerging Technology                      Energy Generation and Storage / NEA Preparation                      Product Design                      Isometric Drawing                      Orthographic Drawing                      Nets                      Memphis Design                      Model making</p>	<p><i>Theory</i>                      Unit 01 - Core Principals                      Smart and Modern Materials                      Systems / NEA Preparation                      Product Design                      Skills project                      Working with timbers                      Accuracy and marking out                      Wood joints                      Skills project                      CAD design                      Use of Software                      CAM                      Use of 3D Printers</p>	<p><i>Theory</i>                      Unit 01 - Core Principals                      Levers and Linkages                      Cams, Pulleys and Gears /                      NEA Preparation                      Product Design                      Skills project                      Working with metals                      Accuracy and marking out                      Tools and equipment.</p>	<p><i>Theory</i>                      Unit 01 - Core Principals                      Materials and Material categories / NEA                      Preparation                      Product Design                      Skills project                      Working with plastics                      Vacuum Forming                      Casting</p>	<p><i>Theory</i>                      Unit 01 - Core Principals                      Ergonomics and Anthropometrics / NEA                      Preparation                      Product Design                      Skills Project                      Desk Utility                      Design Process                      Material selection</p>	<p>GCSE NEA                      Context Analysis                      Client/User Analysis                      Social, Moral, Cultural                      Analysis                      Design Possibilities                      Work of others.</p>
ASSESSMENT	Data collected from theory assessment test		PPE			
Y11	<p>NEA                      Design Brief                      Design Specification                      Design Ideas                      Product Analysis                      Design Development</p>	<p>NEA                      Modelling                      Model Evaluation                      Material Planning                      Tools and Equipment                      CAD                      Manufacturing</p>	<p>NEA                      * Evaluation</p>	<p>Theory                      GCSE Exam Preparation</p>	<p>Theory                      GCSE Exam Preparation</p>	<p>Final exam</p>
ASSESSMENT	Average grade of NEA and PPE.		External exam and grade in NEA			