Y11 DESIGN AND TECHNOLOGY

Yardleys School
WORKING TOGETHER FOR A BETTER FUTURE

DESIGN AND TECHNOLOGY AT YARDLEYS
INTENT: The Design and Technology Curriculum aims to nurture the designers, engineers, and architects of a more sustainable world where they can be reflective and creative individuals able to solve real-world problems using practical solutions. Students are encouraged to consider the needs of others when designing and making products, taking into account the values, culture and the well-being of the nation. We also encourage them to take risks and question the world around them by understanding that design is all around us and that design is for all. The Design and Technology curriculum will give all students the cultural capital they need to succeed in life as well as the ability to challenge and change the ever-changing world of Design and Technology.
Y11 DESIGN AND TECHNOLOGY
Pupils learn important design, making and evaluation skills to ready them for the NEA (GCSE coursework) which begins from June 1st.   Pupils produce a working prototype from their designs which employ the iterative design process.

YEAR 11

Theme	Developing a Design Brief and Specification.	Generating and Developing Design Ideas.	Manufacturing a Prototype.	Analysing and Evaluating Design Decisions and Prototypes.	The Design and Make process – Revision
SUBSTANTIVE KNOWLEDGE	Focused research; Research strategies; Design specification.	Iterative design process Development of final designs Planning the make	Creation of prototypes using CAD/CAM machines and hand tools Analysis of manufacturing processes	Evaluating and testing a prototype; Applying a user-centred approach to product evaluation.	Design and make process, Core technical knowledge across a wide range of topics and materials as well as specialist in-depth knowledge of one chosen material area.
DISCIPLINARY KNOWLEDGE	Research Analysis skills; Product Analysis; ACCESS FM; Design brief; Design Specification .	Sketches; Evaluation of designs; Developed designs; Physical modelling; Virtual modelling; Orthographic/Isometric drawing; Final 3D CAD design	Flow/Gantt charts; Making skills including 2D TechSoft 3D Creo and 3D printer, coping saw, belt sander, scroll saw, pillar drill, line bender, hand tools, finishes (as appropriate)	Creating an evaluation based on product testing; ACCESSFM; Client interviews; Improvement analysis	The Design and Make process; Core knowledge in Woods, Metals and Plastics; Core knowledge in Paper, Card, Textiles and Electronics; Energy; Modern and Smart Materials; The latest developments in Technology.

We aim to provide students with a curriculum that educates the whole child, creating responsible and respectful citizens. Through the development of substantive and disciplinary knowledge students are given the tools that allow them to achieve excellence and be ready for life.