**GCSE Design Technology: Curriculum Intent**

The aims of the curriculum are to:

* acquire, apply and retain knowledge (facts, skills and understanding) in order to design and make high-quality prototypes safely and for a wide range of users within an agreed budget;
* critique, evaluate, refine and test own ideas and products and those of others by considering the design context using different media and techniques;
* develop decision making skills and the expertise needed to perform tasks confidently and participate successfully and responsibly in the world.

These aims will be realised through all students who have chosen this option studying the full programme of study for GCSE Design Technology (AQA).

In addition, the extra time available during Key Stage 4 will be used to go beyond the course requirements to:

* Develop strong foundations for knowledge in Year 9 by students studying a foundation term at the start of Year 9 where they will acquire the knowledge (facts, skills and understanding) needed for the course, build the literacy and numeracy skills needed for future study and to work in the design, engineering and manufacturing sectors.
* Enhance, enrich and enjoy learning in Year 10 by using time to study the key areas of knowledge in depth, connect different areas of study together, have regular opportunities to apply knowledge to solve real life problems, undertake visits to design and manufacturing workplaces and carry out tasks that are enjoyable.
* Get ready for next steps in Year 11 by focusing on the knowledge needed to secure high grades and also the key knowledge needed to study A Level Product Design or BTEC Engineering and for using design technology in work and life.

**GCSE Design Technology: Curriculum Overview**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Aut 1** | **Aut 2** | **Spr 1** | **Spr 2** | **Sum1** | **Sum 2** |
| **Year**  **9** | * Health and Safety * Workshop skills * 2D & 3D Design Programs * Casting | * Laser Cutting * 3D Printing * Wood based skill focused project | * Forge Work * Plastic based skill focused project | * Graphic Materials based skill focused project | * Combination Project for woods, metals and plastic | * Combination Project for woods, metals and plastic |
| * Intro to 2D Design and developing skills * Intro to 3D and developing skills * Orthographic * Isometric * Sketching | * Material Knowledge Development * Electronic subject knowledge * Graphical based Skills | * Branding * Product Analysis * Financial Modelling * Material Finishes | * Construction Techniques * Marketing * Market research * Evaluation methods | * 2D drawing skills   Advanced   * 3D Modelling Techniques advanced * Linkages, gears, levers and mechanical systems * Smart and other new materials | * 2D drawing skills   Advanced   * 3D Modelling Techniques advanced * Ergonomics * Anthropometrics * Packaging |
| **Year 10** | * Mini project 1 Light (design) | * Mini project 1 Light (fabricate) | * Mini project 2 Amplifier | * Non-Examination Assessment (NEA) | * Non-Examination Assessment (NEA) | * Non-Examination Assessment (NEA) |
| * Design, presentation and drawing techniques | * Materials, quality assurance and quality control, ethical issues | * Product Analysis and coursework preparation |
| **Year 11** | * Non-Examination Assessment (NEA) | * Non-Examination Assessment (NEA) | * Non-Examination Assessment (NEA) Completion * Photographs of Product and Spelling, Punctuation and Grammar Checking * Examination Preparation | * Examination Preparation | * Examination Preparation | * Study Leave and Exams |