

Our Design and Technology curriculum aims to ignite innovation and foster resilient problem-solvers who can confidently shape the technological world. We believe in nurturing inherent creativity by immersing students in the complete design process, from initial concepts to evaluation. Through hands-on, project-based learning, students gain practical skills while developing critical thinking and analytical abilities. We emphasise sustainable practices, ethical considerations, and the societal impact of technology, equipping students with diverse material and manufacturing knowledge—from traditional crafts to advanced digital fabrication. Ultimately, our goal is to empower students to become proactive creators and positive agents of change, ready to tackle future challenges and opportunities.

KS3

By the end of KS3 students will be able to communicate their ideas clearly through annotated sketches and technical drawings, while developing an understanding of material properties, sustainability, and basic design principles. They will gain confidence in using hand tools, workshop equipment, and basic machinery safely and accurately, applying problem-solving skills to design briefs. Students will begin to work iteratively—researching, generating ideas, prototyping, and evaluating—while also developing CAD skills and applying engineering drawing conventions to support their design thinking.

KS4

By the end of KS4 students will be able to demonstrate independence and professionalism in their design work, confidently applying the full design process from research and development to prototyping and evaluation. They will complete practical projects and their GCSE NEA, showcasing advanced problem-solving, design communication, and manufacturing skills across a range of materials and processes. Alongside this, students will consolidate their understanding of theory—covering materials, CAD, sustainability, and technical principles—while building transferable skills such as teamwork, time management, and presenting ideas, ensuring they are well prepared for further study or careers in design and engineering.

KS5

By the end of KS5 students will be able to independently manage and deliver complex projects, creating innovative, user-focused solutions supported by thorough research and advanced design methods. They will refine prototypes and final products using sophisticated CAD and manufacturing techniques, while critically analysing existing products and technical challenges to improve outcomes. Students will rigorously evaluate their own and others' work against functionality, aesthetics, technical requirements, and sustainability, demonstrating reflective, professional judgement throughout. These skills will enable them to excel in coursework, examinations, and future pathways in design, engineering, or creative industries.



Topics with the WR logo are directly linked to the Hoe Valley School Work Ready Agenda.

