Design & Technology Curriculum Intent

The Design and Technology curriculum at Hodgson Academy reflects our vision of 'Imagine, Believe, Achieve' and our commitment to 'Excellence for Every Learner.' Students are encouraged to imagine creative and innovative solutions through an iterative design process, believe in their ability to overcome challenges by developing resilience, independence and confidence, and achieve high-quality outcomes through the application of technical knowledge, ambitious subject-specific vocabulary, practical skills and critical thinking. Through meaningful real-world contexts, every student is supported to fulfil their potential as a designer, maker and problem-solver, preparing them for further study, future careers and life in modern Britain.

At Hodgson Academy, Design and Technology is a creative, practical and inspiring subject that enables students to think and work as designers, creating innovative products that solve real-world problems. Our unique contribution is that students combine creativity with technical understanding to design, manufacture and evaluate products that respond to genuine user needs while considering functionality, sustainability, ethics and commercial viability. In doing so, they develop the confidence to shape, rather than simply consume, the designed world around them.

Knowledge is carefully sequenced from Year 7 to Year 11, enabling students to build secure foundations before applying increasingly sophisticated knowledge and skills within independent design-and-make projects. Students develop an understanding of materials and their properties, traditional and modern manufacturing processes, mechanisms, systems, electronics and CAD/CAM technologies. They study the work of influential designers, engineers and architects, drawing inspiration from diverse cultures and industries while avoiding stereotypical responses and developing original, innovative ideas. Alongside technical knowledge, students learn about health and safety, quality control, tolerances and the social, ethical and environmental impact of design decisions, enabling them to understand how thoughtful design influences everyday life.

Students experience both traditional workshop skills and contemporary manufacturing techniques, including laser cutting, 3D CAD, 3D printing and digital manufacture, ensuring they understand how products are designed and produced in modern industry. Literacy is developed through the explicit teaching of ambitious subject-specific vocabulary, while students communicate ideas professionally through sketching, technical drawing, modelling, CAD and written evaluation. These communication skills enable students to justify decisions, present ideas with confidence and evaluate their work using the language of designers, engineers and manufacturers.

Design and Technology develops resilient, reflective and ambitious learners. Students are encouraged to take creative risks, embrace challenge and view mistakes as opportunities to refine and improve their work. Through collaborative working, respectful discussion and responsible decision-making, they develop confidence, perseverance and organisation while promoting British Values through mutual respect, individual liberty, personal responsibility and safe workshop practice.

Our curriculum broadens students' horizons by introducing them to emerging technologies, sustainable design and a diverse range of careers including engineering, architecture, manufacturing, construction, product design, digital technologies and the creative industries. Ultimately, Design and Technology provides every student with the creativity, confidence and

technical expertise to understand, improve and shape the world around them as innovative, responsible and resilient problem-solvers.