



## A LEVEL DESIGN AND TECHNOLOGY: PRODUCT DESIGN

We are pleased to offer the outstanding Edexcel Design and Technology Product Design course. This is where students develop their creativity whilst maintaining the technical rigors of Science and Maths. The course prepares students for the demands of a truly modern and evolving society. Product Design is a development of the Design & Technology and Graphics courses in which our students achieved top results.

### What does the course involve?

Students will learn to recognise design needs and develop an understanding of how current global issues, including integrating technology, impacts on today's world. They will gain the confidence to innovate and produce creative design solutions and develop their own design briefs in conjunction with clients/end users.

### The aims and objectives of this qualification are to enable students to:

- Develop and apply creativity in the context of designing and making products which solve real life problems.
- Develop intellectual curiosity about the design and manufacture of products and systems, and understand their impact on daily life and the wider world.
- Be able to work safely and skillfully to produce high-quality prototypes and products.
- Develop confidence when taking design risks, showing innovation and enterprise whilst being responsible designers and citizens.
- Expand ICT skills, including CAD/CAM.
- Work collaboratively to develop and refine ideas, responding to feedback from users, peers and expert practitioners.
- Gain inspiration from designers to inform and enhance their own understanding and design capability.
- Develop a knowledge and understanding of materials, components and processes associated with the creation of products.
- Apply knowledge and understanding of science and mathematics to inform and enhance their design work.
- Gain an awareness of wider issues in Design and Technology and understand that designers can have a profound impact on the environment and on society and that these, together with sustainability issues, are key features of design and manufacturing practice.

### What exams and coursework are involved?

**Written examination:** 2 hours 30 minutes: Principles of Design and Technology

**The written paper makes up 50% of the total mark.**

The paper includes short answer and open-response questions as well as extended-writing questions focused on:

- Analysis and evaluation of design decisions and outcomes, against a technical principle, for prototypes made by others
- Analysis and evaluation of wider issues in Design and Technology, including social, moral, ethical and environmental impacts.

**Coursework:****Independent Design and Make Project****Non-examined assessment****The coursework makes up 50% of the total mark**

Complete a design, make and evaluate project, which consists of a portfolio and a prototype/product. The portfolio should contain approximately 40 sides of A3 paper (or electronic equivalent).

The assessment will cover four areas:

- Identification of a design problem, investigation of needs and research and specification.
- Design ideas, development of design idea, final design solution, review of development and final design and communication of design ideas.
- Design and manufacture of a final prototype/product, using CAD/CAM and traditional methods.
- Testing and evaluation.

**What are the entry qualifications?**

Although a Design and Technology GCSE is not essential a grade 5 or above is an advantage. The A level provides a clear progression of knowledge, understanding and skills linking our GCSE subjects to university courses or other routes. Our students will be required to show a flair for design and analytical thinking. Product Design A Level combines well with Mathematics and Physics.

**What could I do after completing the course?**

Design and Technology will act as a good A Level for continuing into Higher Education especially on design courses including engineering, architecture, product design and any course requiring critical thinking skills.

**FOR FURTHER INFORMATION CONTACT MRS A WAKEHAM-THOMAS.**