

A-Level Design and Technology:

Product Design

Entry Requirements: 5 in the relevant Design Technology and 5 in Mathematics

Exam Board: OCR

Subject Leader: Mr Fulson jfulson@taptonschoool.co.uk

"If you think good design is expensive, you should look at the cost of bad design." Ralf Speth, CEO of Jaguar Land Rover

All objects/items that you have used today including the screen you are staring at, have been designed by someone. The reason that you will use them without thinking is due to good design. A designer holds one of the most influential roles in society as their products have an unmatched impact on users' lives. Especially in today's climate, Product Designers have the task of solving some of the world's greatest problems. By designing products, that will help to solve the [17 Sustainable Development Goals](#).

If you love innovation and you are not afraid to fail on your journey to excellence, then this is the course for you.

Main Syllabus Area

Product Design is focused towards consumer products and applications; their analysis in respect of materials, components, and marketability to understand their selection and uses in industrial and commercial practices of product development.

At A-Level:

Exam: 26.7% of A-Level (1hr 30 minutes - written paper)

- Analyse existing products
- Demonstrate their technical knowledge of materials, product functionality, manufacturing processes and techniques
- Demonstrate applied mathematical skills
- Demonstrate their understanding of wider social, moral and environmental issues that impact on design/manufacturing industries.

Problem Solving: 23.3% of A-level (1hr 45 minutes - written paper)

- Apply their knowledge, understanding and skills of designing and manufacturing prototypes and products
- Demonstrate their higher thinking skills to solve problems and evaluate situations and suitability of design solutions.

Iterative Design Project: 50% of A-level (Approx. 65 hrs Non-Examined Assessment)

- The 'Iterative Design Project' requires learners to undertake a substantial design, make and evaluate project centred on the iterative processes of explore, create and evaluate.

- Learners identify a design opportunity or problem from a context of their own choice and create a portfolio of evidence in real time through the project to demonstrate their competence.

Method of Assessment

Exams: 50% Externally Assessed **Iterative Design Project: 50%** Internally Assessed

Qualities Required

You should be passionate about designing and making creative products. You need to enjoy coursework and the problem-solving processes in reaching a Final Design. Exploring a range of possible solutions using rigorous, analytical and fluent communication skills to propose the most viable conclusion should be one of your targets.

Links with other subjects

Product Design is an excellent choice in any combination of other subjects as it promotes problem solving/creativity in a commercially realistic setting. Particularly strong vocational combinations might include Business, Physics, Mathematics, Art or Computer Science.

Career Prospects

Includes:

- Any career within design including Graphic Design, Interior Design, 3-D Design, Product Design, Industrial Design, Marketing, Product Development and Production, Sports Equipment Developer, Illustration, Trend Predictor, Advertising, Pattern Cutter amongst hosts of others.
- Also, many kinds of engineering and technical careers including Design Engineer, Special Effects, Animatronics, Music Technology, Automotive Design or designing any product from a Bicycle to a Formula one race car.

Destinations for A-Level Product Design students have, in the past, included - Product Design/Architecture/Civil Engineering/Fashion Design/Building Surveying degrees at Loughborough, University of Sheffield, Liverpool John Moores, Leeds University, and a number of other Russell Group institutions.

Extension and Enrichment Opportunities

Visits to places of industrial interest are vital to the understanding of Product Design. Many links exist between our department and outside agencies, and professional help is often sought for project work, involving state of the art processes.

Reading list

- Core Textbooks:
 - OCR A-Level Design and Technology: Product Design - Dave Sumpner & Will Potts (Hodder)
 - Design and Technology - my revision notes - Simon Arnold
- Recommended Design Books:
 - The Design of Everyday Things - Don Norman
 - Cradle to Cradle - William McDonough & Michael Braungart
 - Design as Art - Bruno Munari
- Magazines & Journals:
 - Dezeen - <https://www.dezeen.com/>
 - Design Week
 - Creative Review
 - E&T Magazine (Engineering & Technology)

Independent Study

1 Consolidate Class Notes:

- Review and summarise notes after each lesson using the **OCR A-Level Product Design** textbook (Dave Sumpner & Will Potts).
- Create visual summaries such as mind maps, timelines, or flashcards using Quizlet
- Listen to podcasts made from ppts on the walk home (coming soon)
- Complete the Microsoft form quizzes for each section

2 Practice Exam Technique:

- Access and complete past papers via the OCR website:
<https://www.ocr.org.uk/qualifications/as-and-a-level/design-and-technology-h004-h006-h404-h406-from-2017/assessment/>
- Use the official mark schemes and examiner reports to self-assess and identify areas for improvement.

3 Listening and Watching:

- Podcasts:
 - 99% Invisible - Stories behind design and architecture
 - Design Matters with Debbie Millman
 - The Honest Designers Show
- **Documentaries/TV Programmes:**
 - Abstract: The Art of Design - Netflix
 - The Genius of Design - BBC
 - Big Life Fix - BBC
 - How It's Made - Discovery/YouTube

4 Engaging with Design Outside the Classroom:

- Maintain a personal sketchbook and portfolio of ideas
- Visit museums and exhibitions (Design Museum, V&A, etc.)
- Follow major design competitions and events (e.g. James Dyson Award)