



DESIGN & TECHNOLOGY (PRODUCT DESIGN)

**Gordon's
Sixth Form**

A LEVEL

Course Details

The course is examined as a whole in a 2.5 hour exam (30%), a 1.5 hour exam (20%) and in the self-directed NEA (50%) at the end of Year 13.

Year 12 (Term 1)

- Theory – Technical Principles and Designing and Making Principles.
- Focused practical task: practical activities.

Year 12 (Term 2)

- Mock NEA completion.
- Theory – Technical Principles and Designing and Making Principles.

Year 12 (Term 3)

- Theory & Exam Skills – Technical Principles and Designing and Making Principles completion.
- Begin NEA: Self directed project.

Year 13

- NEA self-directed project research, problem spotting.

Year 13 (Term 1-2)

- NEA completion.
- Theory: mock exams and revision.

Year 13 (Term 2-3)

- Theory Revision and Exam Skills – Technical Principles and Designing and Making Principles.

Skills and attributes from studying Product Design

Technical ability:

Technical skills and specialist knowledge of how products work are designed and created.

Problem solving:

Problem solving skills and creative thinking allow you to recognise problems and their causes, to identify a range of possible solutions and then assess and decide the best way forward.

Organisation:

Planning and scheduling your work is crucial. This could include being able to prioritise what needs to be done and by when.

Communication and Presentation:

You will need to write clearly and convincingly. Listening skills, the ability to negotiate and to be persuasive are essential to progression. Visual communication is also critical to portray ideas.

Creativity:

Creativity is about being novel and appropriate with your approach to problem solving and designing. You may need to draw on a good imagination to come up with creative solutions.

Analytics:

You'll be collecting and examining information in detail to arrive at a solution, to answer a key question or make an informed decision.

Understanding Client Needs:

Contact with stakeholders and the public requires good customer service skills.

Discipline:

You need to know and do what is expected of you. This ranges from organising yourself, being on time, to being responsible.

Degrees and Careers

Architecture, interior architecture, animation, illustration, engineering, aerospace engineering, automotive engineering, product design, graphic design, marketing, media, television and film production, set design, fashion, costume design, web design, software development.



DESIGN & TECHNOLOGY (PRODUCT DESIGN)

HEAD OF DEPARTMENT

Miss A Edwards

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Exam Board

AQA

Specification

A Level: 7552

COURSE DETAILS

This course is examined at the end of Year 13 and on the NEA (Non Exam Assessment) portfolio.

This creative and thought-provoking qualification gives students the practical skills, theoretical knowledge and confidence to succeed in a number of careers.

They will investigate historical, social, cultural, environmental and economic influences on design and technology, whilst enjoying opportunities to put their learning in to practice by undertaking their own iterative design process and by producing prototypes of their choice as part of the NEA.

Theory topics are as follows:

Units 1-4: Performance characteristics of papers and boards, polymers, woods and metals;

Unit 5: Composite, smart and modern materials;

Units 6-9: Processing and working with papers and boards, polymers, woods and metals;

Unit 10: Modern industrial and commercial practice

Unit 11: Product design considerations

Unit 12: Product design & development

Unit 13: Design methods

Unit 14: Design processes

Unit 15: Responsible design

Students will gain a real understanding of what it means to be a designer, alongside the knowledge and skills sought by higher education and employers.

Please note: Product Design is heavy in **theory and written content**. **Mathematics** content at A Level is equivalent to **Grade 8** at GCSE. Students are required to attain at least a **Grade 6** (higher tier) in Maths at GCSE and must also attain at least a **Grade 6** in Design & Technology. Students are expected to spend a significant amount of time outside lessons developing their design portfolios and progressing their prototypes in the workshop.

HOW WILL I BE ASSESSED?

Assessment Y13	% of GCE	Details
Paper 1: 2 hours 30 minutes	30% of A Level	120 marks, Technical principles: Mixture of short answer and extended response as well as applied problem solving mathematics questions.
Paper 2: 1 hour 30 minutes	20% of A Level	80 Marks, Designing and making principles: Mixture of short answer and extended response and some mathematics questions. Section A, Product Analysis (30 marks): Up to 6 short answer questions based on visual stimulus of product(s). Section B, Commercial manufacture (50 marks): Mixture of short and extended response questions.
NEA: 45 Hours	50% of A Level	100 marks (200 max scaled mark): Substantial design and make task with photographic evidence of final prototype. Self-directed, iterative design process. Approx. 45 electronic portfolio pages.

WIDER READING

- Making It: Manufacturing Techniques for Product Design - Chris Lefteri
- The Inclusive Design Toolkit <https://www-edc.eng.cam.ac.uk/downloads/idtoolkit.pdf>
- Iterative Design in Action <https://www.youtube.com/watch?v=Rnsk5IA52ps>



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