

# Shoeburyness High School

## Year 9 Subject Information Design & Technology GCSE



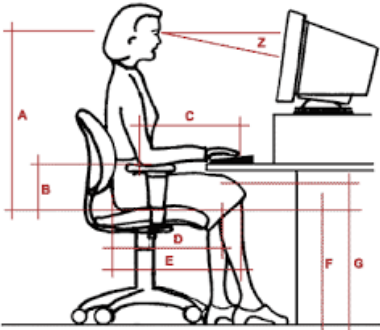
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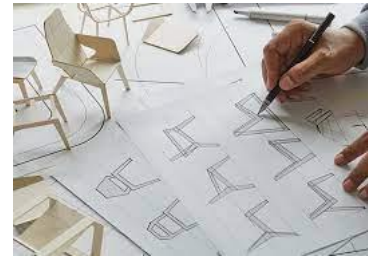
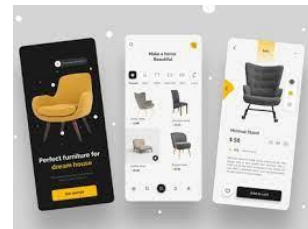
# GCSE Design & Technology



**‘Logical, creative and practical, it’s the only opportunity that school students have to apply what they learn in maths and science.’ James Dyson**

Consider a chair: to design it you need knowledge about how people sit, the forces that are applied to the back and the base, the wood or metal that creates the structure, different types of fabric to upholster it and then to package and promote it; a knowledge of paperboard and papers is essential.

D&T Technology gives students an insight into all these material areas plus develops skills in design. Their practical skills will be developed through a selected material from woods and metals, textiles or paper and board (graphics).



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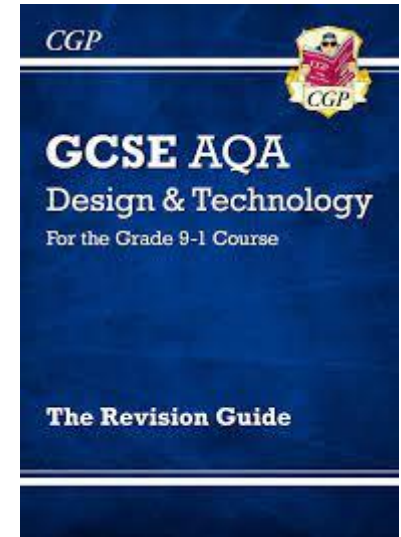
D&T GCSE gives students knowledge and skills to design and make solutions to real problems, on their own and with other people, working with a range of materials and systems.

The materials students will learn about and work with are:

- Paper and board
- Natural and Manufactured timbers
- Metals and alloys
- Polymers
- Textiles

The systems they will explore are:

- Electronic systems
- Mechanical systems



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# GCSE Design & Technology

## Unit 1 - Written paper 2 hours 50%

### Section A – Core technical principles (20 marks)

A mixture of multiple choice and short answer questions assessing a breadth of technical knowledge and understanding.

### Section B – Specialist technical principles (30 marks)

Several short answer questions (2–5 marks) and one extended response to assess a more in-depth knowledge of technical principles.

### Section C – Designing and making principles (50 marks)

A mixture of short answer and extended response questions.

## Unit 2 – Non-Exam Assessment – 50%

- AO1: Identify, investigate and outline design possibilities to address needs and wants.
- AO2: Design and make prototypes that are fit for purpose.
- AO3: Analyse and evaluate:
  - design decisions and outcomes, including for prototypes made by themselves and others
  - wider issues in design and technology.
- AO4: Demonstrate and apply knowledge and understanding of:
  - technical principles
  - designing and making principles.



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# GCSE Design & Technology

## Course structure

**Year 10**, Students will learn about key ideas in Design and Technology such as CAD/CAM, product sustainability and social issues. They will gain an understanding into user needs, market research, product analysis and drawing techniques. Health and Safety underpins all lessons.

They will gain an insight into all the materials listed on slide 2 but will focus on working in one area. Either:

- graphics
- textiles
- Timbers, metals and alloys

Within the material areas they choose, they will learn about selecting materials, forces and stresses, scale of product, quality control, production of materials and different finishes and techniques. They will gain an insight into designers within their selected field of study.

**.Year 11.** Students are given a brief to which they have to respond. This will involve research, analysis of existing products, designing a product and making at least one final prototype in their material specialism.



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# Career Progression

At SHS we run A-level AQA Three Dimensional Design.

## Graphics

Graphic designer  
Magazine layout  
Product designer  
Packaging designer

## Textiles

Fashion designer  
Colour technologist  
Interior designer  
Textile designer

## Woods, Metals and Alloys

Product designer  
Architect  
Civil engineer  
Mechanical engineer  
Carpenter  
Welder  
Metal worker  
Cabinet maker  
Shop fitter  
Joiner

<http://www.julieboyd.co.uk/dt/careers-in-dt/thinking-about-a-career-in/>



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# University Progression

BSc Product Design  
BA (hons) Product Design  
BSc Product Design Engineering  
BEng Product Design and Manufacture  
BSc Architecture  
BA (Hons) 3 Dimensional Design  
BSc (Hons) Architectural Technology  
Production Engineer  
BSc Quantity Surveying and Construction  
BEng (Hons) Civil Engineering  
MEng (Hons) Civil and Construction Engineering  
MEng (Hons) Automotive Engineering  
BA(Hons) Graphic Design  
BA (Hons) Fashion and Printed Textiles  
BA (Hons) Interior Design

There are a huge range of degree courses for which D&T is beneficial or a requirement.



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# Further information

## Contact Information

**Teachers of Subject (will be dependent on area of study selected): Ms R Hopkins, Mr G P Shaw, Mrs L Frost, Mrs M Overill**

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**Head of Faculty: Mrs Beuvink**

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