

DESIGN AND TECHNOLOGY GCSE

What qualification does this course lead to?

You will be awarded one of the following grades: 9-1
OCR Exam board

What topics will I study?

The **creative process** to design and develop products using a range of materials. You will follow the **iterative design process**, and in year 11 design and manufacture a prototype product, from a given design context, to meet a user's needs using a wide range of materials. You will have **1 attempt to sit your exam (worth 50% of the overall grade) at the end of year 11.**



You will study a wide variety of **core technical principles** covering all materials areas including: papers and boards, textiles, metals, polymers, new materials, systems, mechanical systems, environmental, sustainability, industrial practices, enterprise, social/moral and cultural issues, energy generation and storage. You will then **specialise** in to a specific material for example timbers, polymers, textiles and gain knowledge and skills in the workshop to **design and manufacture** prototype products. You will learn how to work with a variety of materials to become an **inclusive designer** considering ecological and social footprint, origin of materials as well as meeting the needs of the end user.

What understanding and skills will I develop?

- **Creativity**
- **Problem solving** through creative and iterative design processes and experimentation
- Understanding design problem and **user needs to creative innovative products**
- Knowledge of a **wide range of materials**: textiles, paper and cardboard, timbers, polymers, metals
- Range of **hand drawn, technical drawing and CAD design**
- **Wider influences** of developing new products e.g. environmental, social/moral/cultural, design constraints
- **Prototyping** and manufacturing using a wide **range of materials (timbers polymers, textiles, etc)**

How will I learn/ how will I be taught?

There is a vast amount of **learning through theory** in this course that **builds on your prior learning of Design and technology** in KS3. You will learn about a **wide range of materials** and how to work with them either to prototype or make real products. This subject is academic with a **high theory content**, also **containing at least 15% maths and 10% science elements** as part of the exam and NEA assessment. **Whilst there are some practical elements of the course, it is not all practical work.**

How will I be assessed?

External Examination in year 11, 100 marks – 50% of final mark – this will include examination of the core technical knowledge (all material areas) as well as the specialist technical knowledge of a specific material including designing and making knowledge.

Non Examined Element (NEA) in year 11: Centre assessed task 100 marks - 50% of final mark

NEA tasks will be released at the end of year 10 by the exam board, these design contexts will change each year. You will need to generate evidence in a portfolio to show how you have solved the client brief.

What can this course lead on to?

P16 courses in product design, industrial designer, creative arts, textiles, manufacturing jobs, apprenticeships and a wide variety of technology careers.

Who do I need to contact for more information?

Mrs K. Goulding or Mrs E. Dandy

Students will need to be photographed as evidence of work undertaken