

## Both pathways

### *What is the Design and Technology GCSE with Resistant Materials/Graphics about?*

The Design and Technology GCSE with Resistant Materials/Graphics covers the knowledge, understanding and skills necessary to allow pupils to successfully complete the design process of exploring, creating and evaluating a product for a specific client. The course will be delivered through a mixture of theory and practical lessons in year 10 and through the completion of the NEA in year 11.

### *Course Content:*

#### **Paper 1:**

##### *Core technical principles*

The core knowledge that all pupils will gain includes the working properties of different materials such as metals and alloys, papers and boards, polymers, timbers and textiles. Pupils will also learn about sustainability and the environment in terms of using renewable materials and clean energy, such as solar power, to design and manufacture products for the future.

##### *Specialist technical principles*

This specialist knowledge builds on the core principles and gives pupils an insight into aspects of design and manufacture such as ecological and social footprint, where materials come from and how they are mined or harvested. Pupils also learn about the properties of materials, the forms they are available in and the techniques used to turn them into products.

##### *Designing and making principles*

To prepare pupils for the NEA in year 11, these principles deal with the designing and manufacturing process from dealing with clients, background researching and investigation and looking at the work of other designers. Pupils also learn how to use design strategies, communicate design ideas to a client and develop a prototype that uses appropriate materials, manufacturing techniques and processes with accuracy.

#### **Non-exam assessment (NEA)**

In the second year of the course, depending on year 10 outcomes, pupils will be steered towards developing their NEA using either a Graphics or Resistant Materials approach. The NEA involves pupils producing a portfolio and prototype product, demonstrating their understanding of the designing and making principles. The theme of the NEA will be taken from one of three contextual challenges supplied by the exam board and is completed in the first two terms in year 11.

### *Assessment:*

#### **Paper 1:**

- Written exam: 2 hours
- 100 marks
- 50% of GCSE

#### **Non-exam assessment (NEA):**

- 30-35 hours
- 100 marks
- 50% of GCSE

### *Benefits and opportunities:*

The Sweyne Park School offers A- level Design and Technology: Product Design. Other local colleges and sixth forms also offer A-level or post-16 courses. Product Design can be studied further via Higher Education.

***Skills:***

Ideal candidates would have good independent learning skills, a willingness to attend after-school workshops, the ability to solve problems, be open to advice, apply creativity and the ability to apply maths and science in D&T situations.

***Subject Leader:*** Mel Curd

***Exam Board:***

<b><i>Subject:</i></b>	<b><i>Board:</i></b>	<b><i>Syllabus Code:</i></b>	<b><i>Examination/NEA/Coursework</i></b>
GCSE Design & Technology	AQA	8552	Exam 50% NEA 50%