



# Design and Technology - Product Design

## Course Content

Product Design is about all that surrounds us. It is a subject which encourages you to design and make products with creativity and originality using a range of materials such as paper/card, plastics, textiles, ceramics, food, electronics, timber-based materials and ferrous and non-ferrous metals. Students will develop a variety of techniques for working with these materials.

The course has a practical approach that encourages students to design and make products with creativity and originality in a variety of practical activities.

The study of packaging, branding and marketing tools are included in the course as part of the process of understanding commercially viable products.

## Course Skills

Students will develop skills in:

- Researching;
- Design creatively;
- Reviewing;
- Planning;
- Making textile products;
- Testing;
- Evaluating;
- Computer Aided Design (CAD);
- Computer Aided Manufacture (CAM).

Students will learn about:

- Materials and components;
- Industrial and commercial practices;
- Importance of quality checks;
- Health and Safety;
- Analysing products;
- Designing products;
- Technology developments;
- Sustainability;
- Ethical design and manufacture.

## Key Stage 3

**Year 7** - Students will be completing a Drawstring Bag design project. They will explore how textiles can be used along with the principals of packaging and why Product Design is important. The project will also cover design drawing and basic design principles.

**Year 8** - Will complete a Sweet Jar Dispenser project, within this students will explore different structures and how they are implemented in design. This will incorporate 2D and 3D design and students will ultimately use knowledge to produce a final model.

## Key Stage 4

**Year 9** – Will work through 3 small projects throughout the course of the year to prepare the students for the level of work expected at GCSE for their final controlled assessment. Each mini-project will be assessed to give a formative grade for that particular skill but will also build up a summative grade for all the work produced up to that date. Parents will be kept informed throughout the course.

**Year 10** - In Term 1 and 2 the students will complete a longer project similar to in Year 9 that will develop the students' technical knowledge and practical skills from the first year of this course. In Term 3 students will begin their controlled assessment that will work toward their final grade for the GCSE which will be continued into Year 11.

**Year 11** – The start of their major design project from inception to completion using all design principles in addition to further study in all resistant materials to prepare them for the final exam at the end of the year.

### **Syllabus Details**

The examination board is AQA and the qualification is a GCSE in Product Design.

### **Assessment**

There is a single tier written examination. It is worth 50% of the final grade.

### **Coursework**

The practical assessment is composed of two main elements; design and making tasks and is worth 50% of the final grade.

### **Spiritual, Moral, Social, Cultural Development Statement**

The Design & Technology Faculty contributes to students' SMSC development by:

#### **Spiritual Development**

Through the projects we offer and the curriculum we deliver at both key stages, students are taught how to investigate products, appreciate aesthetics and evaluate functionality. Students evaluate products from the past and present and examine how they affect our daily lives. They are encouraged to develop their thinking skills, explore the wider world around them, reflect upon what they see and develop an open mind to use this inspiration for creativity when approaching their design work.

#### **Moral Development**

Students are faced with moral decisions through designing, selection of materials, methods of manufacturing, areas of needs for others, sustainability and environmental impact. The 3 R's are routinely discussed throughout the design & make process. Within the classroom and the wider community, students are expected to show respect to others and take responsibility for their own actions and of those around them.

#### **Social Development**

Students are often asked to design and make products to meet the needs of other and value the feedback they receive; they must show mutual respect when working individually and collaboratively. Peer evaluation of designed and made items plays a major role within Design & Technology work. Students learn to articulate their thoughts and feelings about their own and others' work; they also give and receive critical feedback without offence.

#### **Cultural Development**

Students are taught that all their design work should be sensitive to the needs and beliefs of different cultures, ensuring all imagery, text and products won't cause offence and to think about how their ideas and products can impact on the world around them. Students are encouraged to use the work of artists and designers from a wide range of cultures and historical contexts to influence and support their work.

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## **Requirements**

It is essential that any student wishing to study GCSE Design and Technology: Product Design has a genuine interest in the subject and is prepared to work in their own time. Students must feel confident using the tools and equipment and be prepared for a large amount of designing and written work.

### **Staff Contact:**

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