

# DESIGN AND TECHNOLOGY

If you like to apply your **creativity** to find practical solutions to real life problems, develop new products, and see your ideas become **reality**, this subject is for you.

You will learn about a range of materials and technology processes, develop analytical thinking skills whilst evaluating existing products and be able to consider the conflicting demands that moral, cultural, economic and social values and needs can make in the planning and designing of products. GCSE Design and Technology opens the door to a wide range of careers in the creative, engineering and manufacturing industries. You will also develop transferable skills such as teamworking, problem solving and time management which are attributes prized by many employers.

## COURSE CONTENT

The subject content is split into three sections:

1. Core technical principles
2. Specialist technical principles
3. Designing and making principles

In order to make effective design choices students will need a breadth of core technical knowledge and understanding that consists of:

- new and emerging technologies
- energy generation and storage
- developments in new materials
- systems approach to designing
- mechanical devices
- materials and their working properties.

In addition, all students will develop an in-depth knowledge and understanding of the following specialist technical principles:

- selection of materials or components
- forces and stresses
- ecological and social footprint
- sources and origins
- using and working with materials
- stock forms, types and sizes
- scales of production
- specialist techniques and processes
- surface treatments and finishes

Pupils will know and understand that all design and technology activities take place within a wide range of contexts. They will learn how the prototypes they develop must satisfy wants or needs and be fit for their intended use. They will demonstrate and apply knowledge and understanding of a range of designing and making principles.

*I love doing a practical lesson with theory to help me understand the reasoning of how or why things work or don't work.*

## ASSESSMENT: AQA (8552)

**Component 1:** Written Examination worth 50% of the qualification. 2 hours

**Component 2:** Non Examined Assessment worth 50% of the qualification. A substantial design and make task. Students will produce a prototype and a portfolio of evidence. Approximately 30-35 hours.

### Assessment Objectives for Component 1 and 2:

**AQ1:** Identify, investigate and outline design possibilities to address needs and wants.

**AQ2:** Design and make prototypes that are fit for purpose.

**AQ3:** Analyse and evaluate: design decisions and outcomes, including for prototypes made by themselves and others' wider issues in design and technology.

**AQ4:** Demonstrate and apply knowledge and understanding of: technical principles, designing and making principles.

## CONTACT FOR FURTHER INFORMATION

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