

Subject: **GCSE Design and Technology**



Examination Board

AQA

Specification Number

8552

Teacher responsible

Mr Boulton

Introduction

Design and Technology is an enjoyable subject which is great for gaining skills that could be used for the rest of your life. At the UTC we have state of the art CNC equipment such as laser cutters, sign cutting machines, routers, milling machines and a plasma cutter. These machines will enable pupils to progress in different areas and gain experience using up-to-date machines used in industry. This will allow pupils to develop more intricate work, while gaining the skills needed for future career paths. Design and Technology is about designing products to solve a problem or fulfil a need. This course will build on the skills learned in Design and Technology in KS3. Pupils learn to design and manufacture their own products through the use of a range of hand tools, workshop machinery and computer aided design and manufacturing equipment. A GCSE course in Design and Technology is a fantastic subject for gaining a wide range of problem solving skills and experiences.

Course Content

GCSE Design and Technology is a two year course. 50% of the final grade is from a Controlled Assessment Task (Non examination assessment) 50% is from a written exam.

In the Non-exam assessment (NEA) element of the course, pupils will design and make products out of a range of materials including woods, metals and plastics. The topic for the NEA is set by the exam board. Pupils will produce portfolio work including the analysis of the problem to identify the research needed. Pupils will research the problem and investigate similar products in order to develop a design specification and produce a range of design ideas to meet their specification. Designs will be developed through modelling using various materials and prototyping and the use of computer aided design (CAD). Pupils will thoroughly plan the manufacture of their product and go on to manufacture their own design. Products will be tested and evaluated against the criteria their own design specification.

In the Exam Paper, pupils will be expected to answer questions concerning: core technical principles, specialist technical principles and designing and making principles in design and technology

Assessment

Unit 1: Written exam paper (50%) 2 hours

Unit 2: Controlled Assessment Portfolio (50%) 30-35 hours (approx.)

Progression

GCSE Design and Technology could lead on to an AS or A level in the subject which would be a good foundation for university courses in design, architecture, engineering or apprenticeships.