

GCSE Resistant Materials

Exam Board: AQA

Course Description:

Students will work on a range of short projects covering a wide variety of designing and making skills. Each project will introduce them to different designing skills and manufacturing techniques, building a folder of resources which they can use when designing and developing their GCSE product in Year 10.

Course content:

Term 1 and 2 Jewellery project:

During the project, students will learn how to write success criteria and then evaluate their own work.

Term 3 Cad/Cam project:

Students will learn how to use a CAD programme and laser cutter to make a simple product.

Term 4 'Tool' box project:

Students will produce an open top pine storage box and, as part of this, learn to communicate a design through engineering drawings, as well as how to request the materials required for their project.

Term 5 and 6:

Students will produce a range of sample mechanisms and will go on to design and produce a simple toy utilising one of the mechanisms. Students will understand how modelling can be used in the design process to test function.

Important information:

If students are interested in studying A Level Product Design, students must take one of: Resistant Materials, Electronics or Product Design.

Extra-Curricular Opportunities:

Students will be able to access support sessions at lunch times and afterschool throughout the course

Useful websites:

- The Design and Technology Association have an information and helpful video for Parents and Students at <https://www.data.org.uk/>

Provision for the Most Able:

All projects are designed to allow opportunities for all students to be challenged. Assessment sheets for each project provide full details of the requirements of students to reach the highest grades, and the most able students will be encouraged to pick the more challenging options to aim for these top grades.

Assessment:

The student's work will be assessed regularly throughout the projects (every three weeks). For each project the students will receive an assessment sheet. The assessment sheet provides the students with clear success criteria for the full range of grades. Students will be encouraged to regularly assess their own work, using the assessment sheet, to help them to reach their target grades.