

DESIGN AND TECHNOLOGY

GCSE: Design and Technology – with a technical specialism in either: Graphics / Resistant Materials or Textiles

HEAD OF DEPARTMENT: Mrs B Lewis

EXAM BOARD: AQA

Assessment and Qualifications

The course is assessed as follows:

- One 2 hour exam in the summer of year 11 which accounts for 50% of the GCSE.
- One Non Examined Assessment (NEA) project which includes a design folder and a product - 50% of the GCSE. To be completed in the chosen technical specialism for example: Graphics.

The Non Examined Assessment (NEA) consists of a single 'design and make' activity, which will arise from investigating one of three Contextual Challenges set by the exam board which are released annually on 1 June in the year prior to the submission of the NEA.

Sample contextual challenges could include:

- A high profile event
- Addressing the needs of the elderly
- The contemporary home
- Children's learning and development
- The world of travel and tourism

Structure of the Course

- Students will study core technical and designing and making principles, including a broad range of design processes, materials, techniques and equipment.
- Students will also study the chosen specialist technical principles in greater depth i.e. Graphics, Resistant Materials or Textiles.
- Science and Maths principals underpin some of the technical knowledge, with 15% of the exam using Maths within the questions.

Year 10 includes:

- Practical sessions to manufacture prototype products using specialist equipment
- Designing for a need/problem
- 2D and 3D drawing
- Theory work on chosen specialist technical specialism and core materials and processes used in Design and Technology
- Critical product analysis
- Study of the design process and its use to design and develop products
- Preparation for Non Examined Assessment (NEA) project work

Year 11 includes:

- Completion of Non Examined Assessment (NEA) project
- Theory work on chosen specialist technical specialism and core materials and processes used in Design and Technology

Both years will include homework as an integral part of the course allowing projects to progress and learning to be tested and reinforced.

This GCSE Design and Technology course will help students to develop problem-solving skills and decision-making abilities. Learning is student centred and challenging. Activities are designed to prepare students for life-long learning in a technological society encouraging 'individual know-how' and the ability 'to do'. Students are taught; communication skills, project management, time management and are encouraged to make connections between theoretical concepts and real-world applications. The knowledge base and skill set acquired are transferable and can aid their wider studies whilst equipping them with more sought after skills desired by colleges and employers in the future.

Material Specialisms

Graphics

Graphics provides the framework to communicate designs in a graphical way to a high industrial standard predominantly using paper, board and polymers. It is a course which could lead to a career in Product Design, Graphic Design, Animation, Advertising and much more. The course will build on the knowledge gained in Years 7, 8 and 9 and can be further extended at Advanced Level in the Sixth Form. Information Technology forms a small part of the course.

This course will focus on drawing and modelling skills, analysing, designing and manufacturing prototype products. Theoretical studies include; core technical principles, specialist technical principles and designing and making principles.

Resistant Materials

Design engineering provides the framework to formulate innovative design solutions to real engineering problems predominantly using woods, metals and polymers. It is a course which could lead to a career in Product Design, Engineering, maintenance/fitting and much more. The course will build on the knowledge gained in Years 7, 8 and 9 and can be further extended at Advanced Level in the Sixth Form. Information Technology forms a small part of the course.

This course will focus on designing, drawing, modelling, product analysis, problem solving and manufacturing prototype products. Theoretical studies include; core technical principles, specialist technical principles and designing and making principles. Students will learn relevant mathematical techniques to enable them to support and justify design decisions.

Textiles

Textiles provides the framework to formulate innovative design solutions to real textiles problems. It is a course which could lead to a career in Product Design, Fashion Design,

Costume Design and much more. The course will build on the knowledge gained in Years 7, 8 and 9 and can be further extended at Advanced Level in the Sixth Form. Information Technology forms a small part of the course.

This course will focus on designing, drawing, modelling, product analysis problem solving and manufacturing prototype products. Theoretical studies include; core technical principles, specialist technical principles and designing and making principles. Students will learn relevant mathematical techniques to enable them to support and justify design decisions.

Finance/Materials

In general terms the course is free. We try to stock as many materials as possible but there may be some expense to parents including the sourcing/buying materials/components for project work

In cases of hardship please call us and we will try to advise/help.

Health and Safety

This subject is taught in potentially dangerous environments. Health and Safety rules are taught and frequently reviewed. Students are expected to understand and comply fully with all Health and Safety rules.