



## DESIGN TECHNOLOGY DEPARTMENT

### Curriculum Overview



The curriculum of the school reflects the demands of the National Curriculum. It is designed in order to provide all pupils with a broad, balanced education relevant to their needs both now and in the future.

## Departmental Overview

The Design and Technology Technology Department comprises two specialist teachers and three high specification workshops, a workshop preparation room and a state-of-the-art computer suite with access to high quality A3 printing facilities.

## Departmental Staff

Ms C Carney	Head of Visual Arts and Technology
Mr P Lunt	Design and Technology Teacher
Mr S Mawdsley	Design and Technology Technician
Mr E Stansfield	Design and Technology Technician
Mr R Warwick	SLT Line Manager

# Year 7 Design Technology (KS3)

## Examination/Specification Board

## Curriculum Overview

In Year 7, the main focus is on the transition from Key Stage 2 through an introduction to the basic materials and skills used in Design Technology. A total of 4 units are studied throughout the year. A series of 'Focused Practical Tasks (FPTs) introduce pupils to cutting, shaping and joining materials. A longer 'Design and Make Assignment' (DMA) allows pupils to experience the full designing and manufacturing processes involved in creating products for use. They learn how to design and make high quality prototypes and products for a wide range of users.

**UNIT 1** Health and Safety

**UNIT 2** Spatula FPT—working with wood

**UNIT 3** Egg holder FPT – working with plastics

**UNIT 4** Design Eras tea light holder DMA – Design eras exploration, joining and construction methods.

## Examinations/Key Assessments

Assessment takes place at the end of each unit of work. Pupils are encouraged to assess their own work in order to help them become more aware of the progress they are making. Additionally, several key pieces of work (progress tasks) are marked in detail at key points in the year.

## Homework

This is set once per week and is designed to support the work done during lessons. This will include written tasks, questions about the unit being taught, research topics and design tasks. As it is school policy to set weekly homework, a detention will be issued if these are not handed in regularly.

### • How Parents can Help

- Check that homework is looked for each week on Show My homework and that any work is completed to a good standard.
- Ensure that basic equipment is brought to each lesson. A pen and pencil are the minimum requirements.
- Purchase a woodwork apron as soon as possible as this is necessary for all practical activities. Pupils are not allowed to participate in practical lessons without one. Encourage the use of the Internet or the library for research tasks and homework completion.
- Help with research and presentation in order to ensure a good outcome and therefore a high grade on completion.

# Year 8 Design Technology (KS3)

## Examination/Specification Board

## Curriculum Overview

In Year 8, the focus of Design Technology lessons is on helping pupils to explore and understand the concepts of designing for themselves and for others. Pupils are taught how to form, process and combine materials in different ways and begin to make links with the world of industry and manufacture through FPTs and DMAs (Focused Practical Tasks and Design and Make Assignments).

**UNIT 1** Biomimicry design tasks – designing without making. Understanding the world of nature as a design source and inspiration

**UNIT 2** Clock DMA in which design eras of the past are explored and used to inspire clock design. The skills needed to make the product include cutting, shaping, chiselling and the application of a variety of finishes.

**UNIT 3** Bird sanctuary gift shop souvenir DMA – an ‘open’ project in which a variety of materials and processes are considered and explored to design a product which could be sold in a shop

**UNIT 4** Bottle opener DMA in which pupils study mechanisms, particularly levers then consider the different materials and joining methods needed to create the product. Accuracy is vital in this project.

## Examinations/Key Assessments

Assessment takes place at the end of each unit of work. Pupils are encouraged to assess their own work in order to help them become more aware of the progress they are making. Additionally, several key pieces of work (progress tasks) are marked in detail at key points in the year. These highlight strengths and weaknesses and also suggest ways in which improvements can be made.

## Homework

This is set once per week and is designed to support the work done during lessons. This will include written tasks, questions about the unit being taught, research topics and design tasks. As it is school policy to set weekly homework, a detention will be issued if these are not handed in regularly.

## How Parents can Help

- Check that homework is looked for each week on Show My homework and that any work is completed to a good standard.
- Ensure that basic equipment is brought to each lesson. A pen and pencil are the minimum requirements.
- Purchase a woodwork apron as soon as possible as this is necessary for all practical activities. Pupils are not allowed to participate in practical lessons without one. Encourage the use of the Internet or the library for research tasks and homework completion.
- Help with research and presentation in order to ensure a good outcome and therefore a high grade on completion.

# Year 9/10/11 Resistant Materials (KS4)

## Examination/Specification Board

AQA

## Curriculum Overview

Resistant Materials helps students develop their ability to design and make products with creativity and originality, using a range of materials and techniques. It also helps them to develop their knowledge of woods, metals, plastics and composite materials and the use of new technologies to manufacture products is also encouraged. The key concept is to encourage pupils to recognise the contribution they can make to the environment through careful consideration and selection of sustainable resources. Coursework is delivered through a variety of projects which are designed to develop the skills necessary for completing both the course and final examination. Two minor projects are taught in Year 10 and a single, major project in Year 11.

The GCSE Resistant Materials course will appeal to pupils who:

- Have an interest in how products are designed and how they work
- Enjoy using machinery and hand tools to work with woods, metals and plastics
- Want to follow a course that develops knowledge and understanding through both theory and practical work
- Like to work independently on their own designs
- Are able to organise themselves, manage their time effectively and keep to deadlines
- Want to develop good craft skills and produce quality products

## Examinations/Key Assessments

Coursework: 50% - Examination: 50% Controlled assessment tasks now form the basis of all coursework, with all work produced during lesson time done under the supervision of subject teachers.

## Homework

Homework is an essential part of the course. Some tasks are coursework-related and the others take the form of practice questions from past exam papers. Homework is set using Show My Homework website.

## How Parents can Help

Check Show My Homework regularly to ensure that homework tasks are set and completed each week. Encourage progress with controlled assessment and homework tasks. Ensure students arrive prepared for practical lessons.

# Year 12/13 Product Design (KS5)

## Examination/Specification Board

AQA

## Curriculum Overview

The design and appearance of a product can massively influence our decisions. In this course you will be encouraged to take a broad view of Design and Technology, develop your capacity to design and make products to appreciate the complex relations between design, materials, manufacture and marketing. Students with an interest in product design will possess an enquiring mind, be able to think creatively and be prepared to challenge expectations. A qualification in Product Design could lead to a range of further education or career opportunities. You may wish to follow a career path in Interior Design, Set Design, Product Design, Architecture, Motor Sport and Engineering.

## Examinations/Key Assessments

Assessment of A level Product Design combines traditional exams and practical coursework. You will design a product for a client which will aid their lives in some way.

## Homework

Each student will set one homework task per week. The majority of homework is set online via Show My Homework.

## How Parents can Help

Homework tasks will be set via Show My Homework, please encourage your son/daughter to check this website regularly. Students must complete a piece of coursework independently as part of this course.