

Design Technology & Art

Why is Design Technology & Art important and relevant to the development of the whole child in the 21st Century?

Design Technology & Art prepares pupils to participate in a rapidly changing world. They learn critical thinking and problem solving skills helping them become creative thinkers and innovators. Pupils learn to use their initiative and entrepreneurial skills being discriminating and informed users of products. Design Technology & Art is unique in the school curriculum in that it poses pupils practical challenges to which there is no single 'right answer' this helps to develop self-esteem and self-efficacy, a can do approach (a pre-requisite to a successful career in any competitive industry).

What skills will students develop through studying Art Design Technology that will benefit them as a successful learner?

Students will learn to use their initiative through disassembling, analysing and evaluating products. They will develop entrepreneurial, creative and technical competence. Become independent thinkers and learners, effective oral and written communicators. Students will be encouraged to be curious and use their imagination, develop critical thinking and problem solving skills.

How do we bridge from the Key Stage 2 National Curriculum for Art Design Technology as students move from year 6 to 7?

Pupils arrive at Alder Grange from a range of primary schools with varying knowledge and expertise of Design Technology & Art. We therefore see this as an opportunity to begin with a 'blank canvas' and begin from day one, developing knowledge and understanding of the subject through a series of design and practical tasks. These are tailored to rapidly build students skills and confidence in this multi-faceted area of the curriculum.

How do we assess our students' performance in Art Design Technology as they move across years 7 to 9? How do we track the progress of our students' learning and skill development across years 7 to 9?

Performance is assessed in a variety of ways – formally, pupils work is marked, and targets set, these targets follow pupils as they progress through a series of Design Technology & Art modules, being updated as each target is achieved. Each Design Technology & Art module is designed to offer students a range of experiences and develop a multi-skill approach. Pupils are encouraged to discuss design decisions, suggest ways forward and how quality can be improved. Formative assessment, and where appropriate, self and peer assessment are used to help students to become independent learners and thinkers.

Grade collections will report if a pupil's progress shows that they are '**on track**' for achieving both the '**expected standard**' at the end of years 7 to 9 and their own **personal GCSE target**. If a pupil continues to make the necessary progress towards the end of year '**expected standards**' then they will be '**on track**' to meet the **national expectation at GCSE** which is **grade 5**.

Design Technology Course Summaries

Year 7

Design Technology Art and Food, involves students developing their knowledge, skills and understanding of the technological and creative world in which we live. Students will experience working safely with a variety of materials and ingredients, processes, tools and equipment, graphic and art media, to design and create original products, artefacts and meals. Your son/daughter will acquire knowledge, understanding and expertise through a variety of investigative, analytical, graphical, electronic, design, make and evaluative tasks. The emphasis in year 7 is on acquiring and developing a range of graphical/artistic and practical skills.

Year 8

Design Technology Art and Food involves students developing further the knowledge and skills acquired in Year 7. Students are encouraged to become more independent learners through creative thinking, designing and making using a variety of media, components, tools equipment and processes to create original products, artefacts and dishes. Students are given the opportunities to work with various materials and ingredients including wood, metal, plastics, clay, meats, pastries and vegetables together with electronic components and graphical media to produce quality outcomes. In Year 8 the emphasis is on promoting quality through originality.

Year 9

Design Technology Art and Food encompasses all the learning experiences from Years 7 and 8 enabling students to experience a range of activities which mirror many of the subjects on offer at GCSE. Students will undertake work in Product Design manipulating various materials through a range of processes including CAD CAM to design and make functioning products and interesting artefacts. Students will acquire knowledge, understanding and skills in a range of specialist subjects which will be available for them to study at GCSE, under the umbrella headings of Product Design, Art & Design, and Hospitality.

Design Technology Course Progress

Key Stage 3

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process (prototyping, testing, analysing, and refining) of designing and making. They will work within a range of domestic, local and industrial contexts (including home, health, leisure and manufacturing, construction, food, energy, engineering and fashion)

During KS3 Students will acquire skills & Knowledge in Designing & Making

Design

Students will be taught to

- use research and exploration, such as the study of different cultures, to identify and understand user needs
- identify and solve their own design problems and understand how to reformulate problems given to them
- develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations
- use a variety of approaches to generate creative ideas and avoid stereotypical responses

- develop and communicate design ideas using annotated sketches, detailed plans, 3-D and **mathematical** modelling, oral and digital presentations and computer-based tools.

Making

Students will be taught to

- select and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture (CAM)
- select and use a wide range of materials, components and ingredients, taking into account their properties.

Evaluate

- analyse the work of past and present professionals and others to develop and broaden their understanding
- investigate new and emerging technologies
- test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups
- understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists

Technical knowledge

- use the properties of materials and the performance of structural elements to achieve functioning solutions
- understand how more advanced mechanical systems used in their products enable changes in movement and force
- understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with light and sound and as inputs and outputs]
- apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers].

Key stage 3 Art

Pupils should be taught to develop their creativity and ideas, and increase proficiency in their execution. They should develop a critical understanding of artists, architects and designers, expressing reasoned judgements that can inform their own work.

Pupils should be taught:

to use a range of techniques to record their observations in sketchbooks, journals and other media as a basis for exploring their ideas

to use a range of techniques and media, including painting

to increase their proficiency in the handling of different materials

to analyse and evaluate their own work, and that of others, in order to strengthen the visual impact or applications of their work

about the history of art, craft, design and architecture, including periods, styles and major movements from ancient times up to the present day.

Key stage 3 Food

understand and apply the principles of nutrition and health

cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet

become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways;

using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]

- understand the source, seasonality and characteristics of a broad range of ingredient