



# Technology Curriculum

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# Why Technology matters

"THE WORLD OF TOMORROW WILL BE DESIGNED BY THE STUDENTS OF TODAY."

— DIETER RAMS, DESIGNER

The world around us does not simply happen, it is designed. The products we use, the clothes we wear, the buildings we live and work in, the technology we rely on and the food we eat have all been shaped by people making decisions about how things should work, look, feel and meet our needs.

Design & Technology gives pupils the opportunity to become part of that process. It is an inspiring, rigorous and practical subject where pupils use creativity and imagination to design and make products that solve real and relevant problems. Through designing and making, pupils develop practical skills alongside knowledge from areas such as science, mathematics, engineering, computing and art.

Pupils learn to:

- identify problems and opportunities
- generate and develop creative ideas
- select appropriate materials, ingredients, tools and processes
- make, test and refine their ideas
- evaluate their own work and the work of others
- understand how products and technologies affect people and the environment
- become increasingly resourceful, innovative and independent.

Design and Technology also teaches pupils that good design is not simply about making something look good. It is about understanding people, solving problems, making thoughtful decisions and considering the consequences of those decisions. Whether designing a product, creating a textile piece, developing a food product or exploring new technologies, pupils are developing skills and ways of thinking that can be used throughout their lives.

## Designing the future

The choices designers make today can influence how we live tomorrow. Through Design & Technology, pupils have the opportunity to become creative thinkers, confident makers and thoughtful problem-solvers — and to begin thinking about the kind of world they want to help create.

# At Key Stage 3

At Key Stage 3, pupils experience a broad range of Design & Technology through a rotation of Food & Nutrition, Textiles, CAD & Digital Design and Product Design.

The curriculum is designed to provide pupils with a broad foundation in Design & Technology while progressively developing the knowledge, technical skills and understanding needed for further study, practical application.

Across the different subject areas, pupils visit and build on core Design & Technology knowledge and skills, with increasing levels of challenge and independence as they progress through Key Stage 3.

Particular emphasis is placed on developing:

Technical knowledge and vocabulary – understanding and using the language of D&T to describe materials, components, systems, tools, equipment and processes.

Materials and processes – developing knowledge of the properties and uses of different materials, ingredients and components, and learning how they can be manipulated and combined.

Design development: moving from simple ideas and sketches towards more developed designs, using appropriate methods to communicate and refine ideas.

Practical capability: building a progressively wider range of practical techniques and becoming increasingly confident in selecting and using tools, equipment and processes.

Systems and mechanisms: developing an understanding of how products work, including structures, mechanisms, STEM challenges, electrical and electronic systems where appropriate.

CAD and digital technologies – developing skills in using digital tools to support designing, modelling, communication and manufacture.

Independence and confidence: gradually taking greater responsibility for planning, decision-making, organising practical work and responding to problems.

Risk-taking and experimentation: developing the confidence to try different approaches, make mistakes, learn from them and make informed changes.

The rotation across different areas allows pupils to encounter a variety of materials, technologies and specialist processes, while the core principles and knowledge of Design & Technology are revisited throughout the curriculum.

This progressive approach supports the aims of the National Curriculum and provides a foundation for pupils to move towards greater specialisation and more demanding projects at Key Stage 4

# At Key Stage 4

At Key Stage 4, pupils have the opportunity to develop their interests and strengths through more focused practical pathways.

Our current pathways include:

## **BTEC Level 1 & 2 Home Cooking Skills**

This pathway develops practical food preparation and cooking skills alongside knowledge of ingredients, equipment, nutrition, food safety and healthy choices. Pupils develop increasing independence and confidence in planning and preparing food for themselves and others.

## **AQA Unit Awards in Resistant Materials**

This pathway provides opportunities for pupils to develop practical skills in working with materials, tools and equipment, alongside designing, planning and making products. Pupils learn to work through a design process, select appropriate materials and processes, and develop greater accuracy and independence in practical work.

## **Preparing for life beyond school**

The practical and design skills developed through D&T can provide a useful foundation for pupils moving on to further education, vocational training, apprenticeships and employment. D&T helps pupils develop experience of working with materials, tools, equipment and processes, while also developing the ability to follow instructions, plan and organise tasks, work safely, solve practical problems and make decisions.

These skills can be relevant to a wide range of practical and technical pathways, including areas such as construction, engineering, manufacturing, catering, hospitality, fashion and textiles, product manufacture, creative industries and other skilled occupations. Just as importantly, pupils develop the confidence to have a go, learn through practical experience, respond when something does not go to plan and take increasing responsibility for their own work. Our aim at Key Stage 4 is therefore not only to support pupils in achieving a recognised qualification or certificate, but also to help them develop practical capability, independence and transferable skills that they can take with them into their next stage of education, training, employment and importantly life.

