



Meridian
Trust

Curriculum Overview Design and Technology



Curriculum Overview

Key Stage 3

Curriculum Aims

KS3 Design and Technology allows all students to demonstrate their individual creative flair, problem-solving abilities and practical skill within a range of subject disciplines.

Students build upon their prior experience and acquire new knowledge, skills and attributes applying these both independently and collaboratively in a range of contexts, activities, tasks, and projects.

The subject will equip them with the necessary skills to meet their own and the needs of others in an ever changing and unpredictable world. They will consider carefully and 'design for our tomorrows' through new, emerging, and digital technologies but also using traditional techniques and processes. They will understand, empathise, respect and value people, places, and the implications of their decisions upon the environment as part of their design and technology journey.



Key Curriculum Content

Throughout KS3, students acquire, develop, apply, and enhance their D&T capability across several different subject disciplines all of which are designed to provide the students with a holistic skill set. Typically, students follow a pathway of study through subject areas such as control systems and electronics, graphic communication and design, textiles, CAD/CAM, timber and boards, metals and alloys, papers and boards and food technology.

The content is often complimented with smaller discreet units of study, home learning and off timetable activities to ensure that the programmes of study for D&T are covered by the end of the key stage.

How are students taught and assessed?

Students are taught by Design & Technology teachers who possess subject specialisms or expertise. In some trust schools the teachers deliver the D&T curriculum across the disciplines

"THROUGHOUT THE CURRICULUM STUDENTS DEVELOP A LIFELONG LOVE OF LEARNING AND THE NECESSARY SKILLS TO BE A RESILIENT, CONFIDENT AND INDEPENDENT LEARNER."

and in others just their specialism. Students work on both designs, written and practical activities to enable the key learning outcomes to be achieved. Students are expected to complete complimenting homework that both prepares for and enriches their learning experiences across the disciplines. Health and Safety guidelines are always followed and enforced to ensure



that students are working in a safe and controlled environment.

Work is closely monitored and assessed in line with whole trust policy. Being a practically orientated subject, verbal feedback is most common. However, this is also supported by written and formative feedback. Testing is also carried out either mid-way through or at the end of units of study to provide summative assessments. Reporting is also in line with whole trust policy.

Curriculum allocation at KS3 varies in trust schools. Typically, it is 1 to 2 hours per week at KS3 and this is complemented with external studies.

Typical Curriculum Allocation:
1-2 hours per week



Curriculum Overview

Key Stage 4

Curriculum Aims

KS4 qualifications allow students to demonstrate their individual creative flair, problem solving abilities and practical skill in a chosen subject area.

Students build upon their KS3 studies and acquire new knowledge, skills and attributes applying these both independently and collaboratively in a range of contexts linked to the qualification being studied.

The subject will equip them with the necessary skills to meet their own and the needs of others in an ever changing and unpredictable world as well as preparing them for the world of work and future study. They will study assignments, units, and projects through new, emerging, and digital technologies as well as learning and applying more traditional techniques and processes.



Key Curriculum Content

A wide variety of subjects are available for study across the trust and will vary by school depending on their facilities, teaching experience and student numbers.

All subjects offer a mix of theoretical knowledge alongside practical experiences and allow students the opportunity to build up their creativity, problem solving, planning, and evaluation skills. Skills developed whilst studying these subjects not only provide a solid foundation for further study but provide valuable, important and desirable transferable skills for the workplace.

GCSE subjects:

- **Food Preparation and Nutrition** – an exciting and creative course which focuses on practical cooking skills and theory knowledge to ensure students develop a thorough understanding of nutrition, food provenance and the working characteristics of food materials.
- **Design Technology** – prepares students to participate confidently and successfully in an increasingly technological world. Students gain awareness and learn from wider influences on Design and Technology including historical, social, cultural, environmental, and economic factors. Students will get the opportunity to work creatively when designing, prototyping and making and apply technical and practical expertise. **Note: Some schools offer the D&T qualification through a specific lens i.e. Textiles.**
- **Engineering** – introduces students to a host of new technologies, helping them to gain practical skills and understanding to inspire a lifelong interest in engineering. Appealing to those who



enjoy being creative, with an affinity for drawing, design, maths and problem-solving.

- **Art Textiles** – A programme of study which broadens experience, develops imagination and technical skills, fosters creativity, and promotes personal and social development through the use of all textile mediums.

BTEC subjects:

- **Construction & the built environment** – is aimed at everyone who wants to find out more about construction and the built environment, looking at different technologies, designs, and materials.

Level 1/2 subjects:

- **Hospitality & Catering** – designed for those who want to learn about the hospitality and catering sector and the potential it can offer them for their careers or further study.
- **Engineering design** – This qualification is aimed at learners who wish to study the processes involved in designing new engineered products and the requirements of a design specification.

Typical Curriculum Allocation:
4-5 hours per fortnight

How are students taught and assessed?

Students are taught by specialist teachers across the trust. The courses are delivered in a variety of different ways, but all have the syllabus running through their core.

Facilities influence how the courses are accessed and delivered in individual schools.

Key assessment takes place regularly in line with whole school and trust policy and students are prepared for the examination series for their cohort through internal and external assessments associated with the qualification.

The suit of courses on offer requires the students to complete coursework, written exams and key learning units. Courses are weighted differently, and these can be viewed via school websites and by contacting individual schools directly. Alternatively, course syllabus' can be downloaded via the assigned exam boards.



Curriculum Overview

Key Stage 5

Curriculum Aims

KS5 qualifications allows students to demonstrate their individual creative flair, problem solving abilities and practical skill in a chosen subject area.

Students build upon their KS4 studies in this area and acquire new knowledge, skills and attributes applying these both independently and collaboratively in a range of contexts linked to the qualification being studied.

The subject will equip them with the necessary skills to meet their own and the needs of others in an ever changing and unpredictable world as well as preparing them for the world of work and future study. They will study assignments, units, and projects through new, emerging, and digital technologies as well as learning and applying more traditional techniques and processes.



Key Curriculum Content

At schools where a sixth form is available there are several routes which students can follow. All routes offered provide a solid foundation on which to develop further study at University or to succeed in the workplace.

A Level subjects:

- **Product Design** – This qualification investigates historical, social, cultural, environmental, and economic influences on design and technology. Student’s design, prototype, refine and articulate resolutions to problems that range in context. It provides a perfect steppingstone to university courses and apprenticeships for students hoping to become designers of the future.
- **3D Design** – This route of 3D Design offers students the opportunity to explore a wide variety of materials, focusing specifically on the Product Design and Architecture routes into the design industry. Students will learn about furniture and interior design, architectural modelling using computer aided design software and will complete focussed practical tasks exploring the working and aesthetic properties of woods, metals and plastics.
- **Art Textiles** – Whilst studying this A level students develop critical, practical, and theoretical skills across a range of different mediums including fashion, costume, digitally or traditionally printed and/or dyed fabrics, garments and



materials, interior design, constructed textiles (knitted, woven, embellished, or combined with other materials), textile installation or accessories. The course provides an excellent base from which to study further in fields such as fashion or textile design.

BTEC subjects:

- **Engineering (certificate or diploma)** – The BTEC qualifications are designed to provide specialist, work-related qualifications in a range of vocational sectors, providing knowledge, understanding and skills that are valued by employers. These qualifications in Engineering have been designed to give students the knowledge and specific skills needed to meet the needs of modern mechanical engineering industries.
- **Level 3 in Construction & the Built Environment** Students will develop skills in design, analysis and evaluation as well as study topics including surveying, setting out, estimating, construction design and health and safety. Students will also study the impact the built environment has on economic, social and environmental issues, allowing students a greater understanding of how the construction industry works.

Typical Curriculum Allocation:
8 hours per fortnight

How are students taught and assessed?

Students are taught by specialist teachers and as with GCSE cover a syllabus of key knowledge and technical abilities. There is a focus on independent working and there is an expectation that students study outside of the school environment.

Assessments are undertaken in line with school and trust policy and range from written exams, practical assignments, working to real life briefs, working with local industry and business. Students are expected to maintain a folder or portfolio of evidence that articulates how they are meeting the requirements of the qualifications.



Curriculum Overview

Enrichment

Beyond the classroom

A variety of trips and visits, competitions, inter house, links with industry and local business support and enrich the Design and Technology curriculum.

Cross-Trust Activities

Activities week cross trust events (food and D&T), STEM group, competitions

Why study Design and Technology?

Design and technology enables students to demonstrate:

- Resilience, articulation, communication, problem solving, design & technical thinking, decision making
- Thinking about and 'designing for our tomorrow'.
- The application of science and mathematics in a practical context.
- Communicating and articulating ideas through a wide range of media
- Empathising with individuals and situations and suggesting potential resolutions and solutions.
- Making things a reality – design to make.

The subject is forever evolving and never stands still – this speed of change makes it unique.

We need to be equipping our students to be creative thinkers and problem solvers to enable them to succeed in the future.

Design & Technology's core principles allow this to take place





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