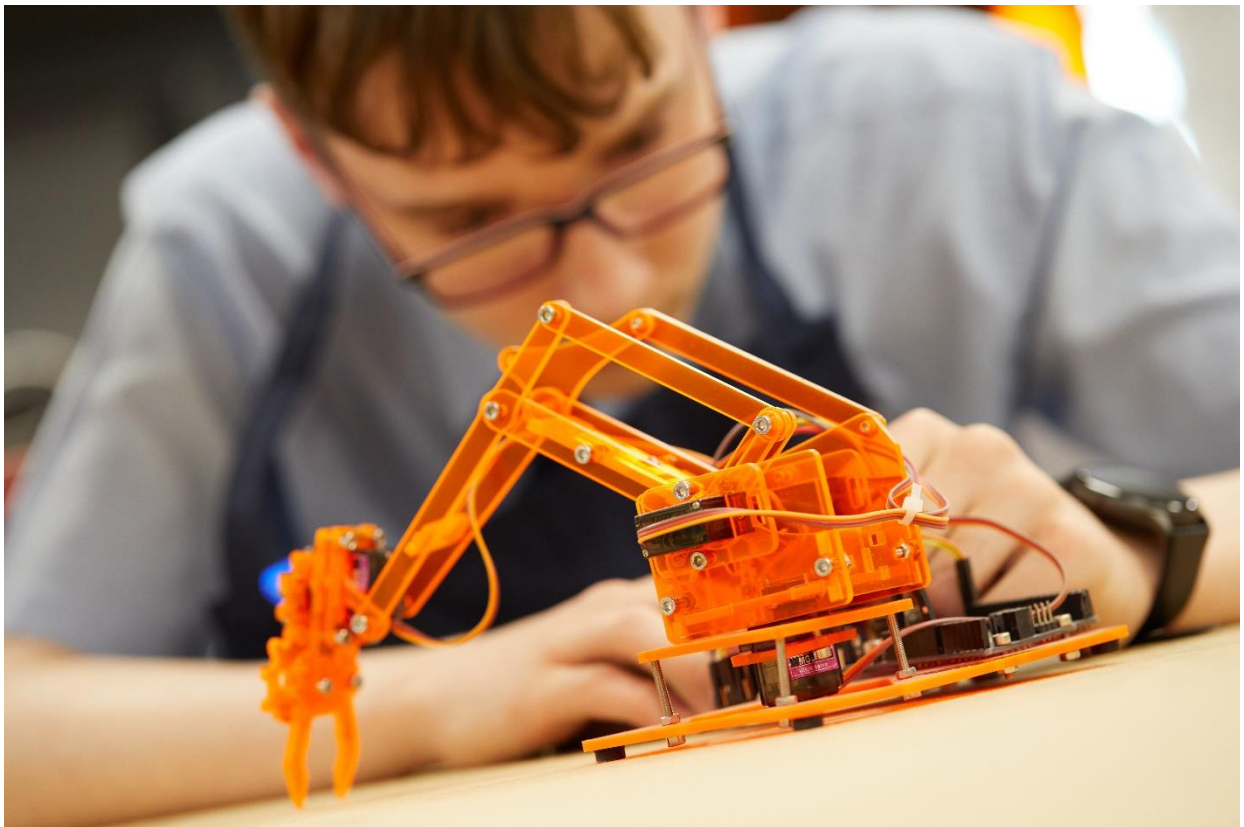




WILLIAM FARR

C of E Comprehensive School



**DESIGN, ENGINEERING
AND TECHNOLOGY
DEPARTMENT**

CANDIDATE INFORMATION

SCHOOL VISION

William Farr Church of England Comprehensive School aims to provide the highest quality of education whereby everyone is encouraged to strive for excellence in all that they do and each student is known, valued and achieves as an individual.

We will know that we have achieved our vision when:

- Every student has the opportunity to develop their knowledge and understanding through a broad and balanced curriculum.
- Every individual is confident and behaves in a way that reflects the Christian principles on which the school was founded.
- Everyone knows that they are valued.

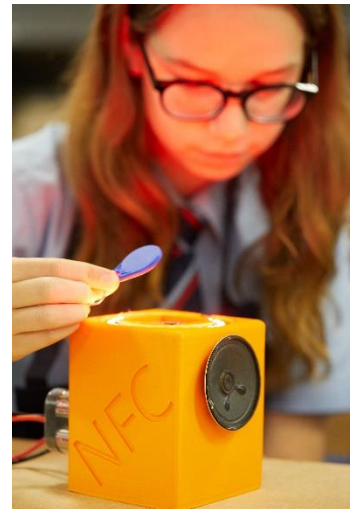
THE DESIGN AND TECHNOLOGY DEPARTMENT

The department currently has seven specialist full-time and two part-time Design and Technology teachers with three full time technicians. We deliver courses in GCSE Design and Technology through Electronic Systems, Product Design (Timbers) and Textiles routes, and Food Preparation and Nutrition and Graphic Communication. At A-Level we run courses in Design Engineering, Graphic Communication and Product Design.

The department aims to foster an appreciation of design, their appropriate technologies and to develop an understanding of the technical knowledge and skills students need in order to achieve their best. Staff aspire to teach 21st century learners, equipping them for business and industry, teaching high quality designing, making and engineering with links to the STEM agenda.

In Key Stage 3 we teach students two-hours a week in a carousel format taught by a specialist teachers where possible covering Engineering, Product Design, Fashion, Food and Graphics on a 7-week rotation in specialist spaces.

All members of staff are enthusiastic about their subject and collaboratively design schemes of work and as specialists are trusted to write schemes of work that they are passionate about. The co-operative system of sharing schemes of work and resources within the department is key to the success of the projects.



The department is well resourced and is sited over two floors. Downstairs are two workshops and an Electronics lab. The Electronics room has soldering facilities, PCB drills, 20 networked PCs and a store room where Photo Etch and Rotary Spray tanks are kept. The two Product Design workshops are equipped with two A2 laser cutters and a CNC Router as well as several 3D printers, two centre lathes, a wood lathe, milling machine, bandsaws, vacuum forming machines, pillar drills, hegner saws in each workshop and a heat treatment area comprising of welding and casting facilities, a hearth and a coke forge. The technician's prep room and materials store houses the circular saw, planer thicknesser, grinder and power hacksaw as well as general materials. Upstairs the main Food room has 12 ovens while a second Food room houses another 7 ovens with 20 networked PCs. The Graphics suite has 20 networked PCs and an A3 Dye Sublimation printer and heat press. The Textiles room is stocked with 30 Brother sewing machines, 3 Husqvarnas and a Brother CAD/CAM embroidery machine. In addition it has two Over Lockers, two Embellisher machines and a Dye Sublimation printer and heat press. The department's sixth formers are taught in our two specialist Post-16 classrooms, one is used for small groups with 10 networked PCs and the other has 16 networked PCs.

There is a central departmental office used as a base for staff with their own desk and their resources. We also have an A3 colour laser printer, scanner and photocopier for students and staff to use as well as a bank of 20 laptops for the department's use. All rooms have data projectors with Apple TV connected to them.

THE DESIGN AND TECHNOLOGY CURRICULUM

In Key Stage 3, every student is taught Design and Technology for two hours a week. Students are taught in mixed ability groups and follow a common programme of study in KS3.

In Years 7 through to Year 9 students are taught across a seven-week carousel of five different subjects covering Electronics, Product Design, Fashion, Food and Graphics. Projects offer more challenge over the key stage and students cover a range of sections of the design process in different projects to limit any repetition, other than designing and making which is a staple of each project. All students work in sketchbooks which they take with them on their journey through the department which documents all design work, classwork, homework and assessments.

At GCSE we follow the Pearson specifications for Design and Technology including Electronic Systems, Product Design (Timbers) and Textiles routes. The department also runs Food Preparation and Nutrition (AQA) and Art and Design Graphic Communication (AQA). The Head of Department is the Lead Principal Moderator and Senior Examiner for a leading examination board and is a Specialist Leader of Education (SLE). Uptake is high with over half the cohort selecting one or more Design and Technology subject for GCSE. Food and Product Design are popular with two groups in each examination year across GCSE. At A-level we run Design Engineering (OCR), Product Design (Pearson) and Art and Design Graphic Communication (AQA). Uptake is healthy with group sizes of approximately 10-14 students in most groups.

BEYOND THE CURRICULUM

We offer a number of activities to engage students in Design and Technology.

We enter teams in local and national competitions, including the Raytheon Quadcopter Challenge, Engineering Education Scheme, Siemens Females into Industry and F1 in Schools competitions. We celebrate our students' work every year by holding an annual 'D&T Show' in the Main Hall to exhibit all of our A-Level work and the Best of our GCSE work.

We are actively looking for educational visits to broaden our students' experiences. In Year 12 we run a two-day London trip to help support their studies. Every two years we take our Year 13 students to New York and Barcelona. We also run trips to Fashion Collective, Big Bang Fair, Design Museum and Jaguar Land Rover, Mini and JCB. In Year 11 we run a Pop-Up Restaurant in a day with local restaurateurs with our Year 10 Food and Nutrition students.



ACHIEVEMENTS

The department has supported fourteen students in gaining the prestigious Arkwright Scholarship award over the last eleven years.

We have been actively involved in the Engineering Education Scheme with EDF Energy which has brought huge success. The department continues to maintain high results; in 2019 and the three years preceding, we achieved our highest results ever for GCSE with 88% of students gaining a 9-4 and we have more and more students going on to university courses in Product Design, Graphic Design, Fashion, and a range of Engineering courses.

PSHE

In addition to teaching within the department, the successful candidate will be expected to contribute to the school's Care and Guidance programme, including the delivery of PSHE (Personal, Social and Health Education) as part of his or her form tutor responsibilities.

“William Farr Church of England Comprehensive School is one of the best schools in the country at outperforming expectations for their pupils and improving their future prospects.

There is plenty that other schools could learn from William Farr Church of England Comprehensive School’s success.”

Sue Williamson, Chief Executive of SSAT

William Farr Church of England School

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