

Introducing *Enterprise Technology*



A new subject at Croydon High forming part of an exciting 'disruptive technology' curriculum for tomorrow's world



Croydon High School
for girls aged 3-18

DISRUPTIVE TECHNOLOGIES

In 1991 a British computer scientist named Tim Berners-Lee released the worldwide web, a new technology enabling the exchange of information over the internet. This disruptive technology fundamentally changed the world as we knew it, having a transformational impact on business, commerce, education, industry, government and daily life.

As costs reduce and computing power increases a new wave of emerging and potentially disruptive technologies are entering the mainstream. These include Artificial Intelligence, Robotics, Augmented Reality and the Internet of Things. These platforms present a vast range of new and as yet uninvited opportunities for business and the individual.

THE 21ST-CENTURY CAREER*



“Skills in maths, statistics, project management, and logical thinking are now prerequisites for most positions.”

“It’s safe to say that anyone who lacks a basic understanding of science, technology, engineering, and math – the STEM fields – will likely find limited career options; That said, STEM no longer tells the whole story of skills in the 21st century. Tasks based on maths, science, and engineering are vulnerable to automation, so they should be complemented with soft skills and other strengths as well”

“While the core need for technical skills remains strong, another theme has entered the job market: the need for people with skills in communication, interpretation, design, and synthetic thinking; These “renaissance jobs” are those that combine technical expertise (in one or more domains) with expertise in design, project management, or client and customer interaction”

*Source: Catch the wave: The 21st-century career – Deloitte Review, issue 21.



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ENTERPRISE

1. a project or undertaking
2. a business or company

AIMS OF THE ENTERPRISE TECHNOLOGY PROGRAMME

- To ensure girls are real-world ready and prepared for the future.
- Girls will be equipped to embrace emerging and disruptive technologies, particularly in their chosen career/area of study.
- To provide opportunities for academic enrichment, problem solving, risk taking, independence, collaboration, leadership and entrepreneurship.

CHANGES TO THE CURRICULUM

In response to the opportunities presented by emerging technologies and the longer term career needs of pupils a new innovative technology programme is being introduced at Croydon High School, initially at Key Stage 3.

The programme will encompass and expand the existing computer science curriculum and provide new opportunities for all subject areas to engage with technology. Seven new fields of technology study will be offered: robotics, augmented reality (AR), virtual reality (VR), artificial intelligence (AI), the internet of things (IoT), cyber security and software development.



Girls will study how these technologies work, explore current and future applications across a range of industries and subject areas, consider the potential impact of these technologies on society and debate the legal and ethical issues presented.

The new software development component will provide opportunities to develop web and mobile applications across all subject areas using industry standard programming languages.



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REAL-WORLD PROJECTS

Pupils will work on real-world emerging technology centred projects which provide a rich source of problem solving, invention and leadership opportunities.

Projects will be cross-curricular in nature and will not be limited to the **STEAM** (Science, Technology, Engineering, Art and Maths) disciplines. There is tremendous scope for all subjects to leverage emerging technologies to enhance and provide access to learning.

Initiatives will provide experience of being part of and managing a project across the entire project lifecycle through requirements analysis, design, build, testing and evaluation activities. Pupils will consider the feasibility and scope of projects, how to run a successful team, the planning and estimating of work, and reflect on a range of commercial considerations such as funding, marketing and selling an idea. Projects will provide an entrepreneurial platform for pupils.

The end-to-end nature of project work enables all pupils to participate regardless of their strengths or interests. Whether girls are technical, creative, academic or entrepreneurial everyone will be able to contribute and pursue their own individual interests.

SUPPORTING OUR GIRLS

To better support our girls the technology timetable will be extended bringing it in line with the other sciences. In addition the technology ICT suite is to be replaced with a new facility that better supports project-based learning and invention activities.

Partnerships with academia and industry will help to provide access to the latest developments and to provide a real-world context. Girls will have the opportunity to engage in a range of national, local and internal school competitions.

The programme will seek to establish a technology mentoring programme so that pupils can develop and pursue their interests beyond the classroom.

CONTACT

For further information please contact the Department of Computer Science and Technology at Croydon High School on **(0)20 8260 7500**.



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