



Computer Science curriculum intent

WHSG Computing department's approach to the curriculum is to develop an understanding of the importance of computing and its impact on the world. We want our students to have skills for life.

The curriculum is an integrated and holistic approach that will equip our students with the tools necessary to appreciate the implementation of computational technology to the current world and its future developments. It will encourage and develop a safe and confident approach to Computing and ICT.

The curriculum design aims to maximise opportunities that reflect the high standards of Wallington High School for Girls. Our intention is to allow our students to value the application of Computing as a major part of life and its influence on real-life decisions thus being able to question the moral, ethical and human effects of this on society.

We also recognise the wider interests of students and therefore facilitate the appropriate use of Computer devices both in school and at home.

Implementation

The Computing syllabus has been developed to provide an inspiring curriculum that challenges and stimulates our students through a variety of languages and computing techniques from KS3 onwards. It covers the main areas of Computer Science, ICT and Digital Literacyⁱ.

Our students will be introduced to the IT skills they will need to support other subjects across the curriculum and will be introduced to programming, algorithm application, creative thinking, complex elements of software packages and an understanding of computer hardware and their function.

Students will develop analytical skills and questioning in order to create original solutions to real world present and future issues. Through wider reading and extra-curricular clubs, they will further enrich their awareness of the implications and role of Computational devices in society. The syllabus will also allow for cross-curricula links in understanding how to utilise other subject areas in order to apply their skills such as bio-technology.

Impact

Our Students will be able to develop a deeper comprehension of:

- Computational thinking
- Creative problem solving using CS techniques such as abstraction and decomposition
- Impact of CS on the world such IoT, Smart and Connected devicesⁱⁱ
- Question ethical and moral issues
- How software behind products work
- Learning how to take risks with their programming skills in order to produce new and original solutions to problems
- Apply the principles of effective programming

- Applying their knowledge of IT skills across other subjects to support their learning

Computing is an essential part of student learning. By empowering our students to understand the world and how it applies relatively new computational technology in day to day lives, and the rate at which it is ever expanding, students can make well-informed decisions and be a part of future developments. It is also important to understand how to design and make solutions to current problems and be aware of smart cities and technology that will have an impact.

ⁱ "The ability to use **digital** technology, communication tools or networks to locate, evaluate, use and create information."

ⁱⁱ <https://medium.com/@YogeshMalik/smart-connected-and-iot-based-devices-whats-the-difference-36fc1bdc36b2>