

Computing

Curriculum intent

Curriculum Objectives

What does it mean to study computing at Humphry Davy School?

Computing education equips students with the ability to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Curriculum intent

What we want students at the end of year 8 to know

- Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns.
- Understand several key algorithms that reflect computational thinking (for example, ones for sorting and searching); use logical reasoning to compare the utility of alternative algorithms for the same problem.
- Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems.
- Make appropriate use of data structures (for example, lists, tables or arrays).
- Design and develop modular programs that use procedures or functions.
- Understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits.

What we want students at the end of year 11 to know

To consolidate their understanding of computing and ICT through the use of their knowledge developed at key stage 3 within their timetabled curriculum. To gain a greater knowledge of a range of technologies and how they should be used safely, respectfully, securely and responsibly.

How British Values, PSHE and Careers are promoted your subjects curriculum

- Understand individual liberty (our self and of others).
- Understanding how to recognise discrimination.
- Understand and develop a respect for the rule of law, and that law is put in place to protect us.
- Understand how Internet Safety could impact our Health and Wellbeing.
- Understand that online relationships are formed commonly, and that we must be mindful of others' intentions.
- Understand the impact of sharing our personal data.