The HENRY BEAUFORT School

| Year 7-9 Core Computing National Curriculum Points. | Year 7 | | | | Year 8 | | | | Year 9 CORE IT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E-safety | CodeCombat | Modelling Data | Small Basic | Impact of ICT in society | Computer Systems | Python First steps | App Design and Game Design | Cyber Security | Data Science | Machine Learning and AI | Audiovisual | |
| Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems | | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | | |
| 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 simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] | | | | ✓ | | ✓ | | | | | ✓ | | |
| Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems | ✓ | | | | ✓ | ✓ | | | ✓ | | | ✓ | |
| Understand how instructions are stored and executed within a computer system | | | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | | |
| Understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits | | | ✓ | | | ✓ | | | | | | ✓ | |
| Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users | | ✓ | | ✓ | ✓ | | | ✓ | | | | ✓ | |
| Create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability | ✓ | | | ✓ | | | | ✓ | ✓ | | | ✓ | |
| 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 | ✓ | | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | |