



At Clifford Holroyde pupils in key stage 3 have 3 lessons of Information and Communication Technology each week, pupils in key stage 4 have between 2 and 6 lessons of Information and Communication Technology each week depending on the subjects they have chosen for their options. All pupils follow the national curriculum for Information and Communication Technology. Pupils in key stage four follow the Edexcel Functional Skills syllabus for Information and Communication Technology.

Pupils in key stage 4 are also offered the option to complete AQA Unit Awards as an alternative to the traditional GCSE route.

### Key Stage 3

All pupils in Key Stage 3 follow the national curriculum for Computing and Information and Communication Technology. Within their lessons pupils will focus on areas such as:

- 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 2 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, reuse, revise and repurpose 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.

Key Stage 3 pupils are assessed six times a year at the end of each half-term.

#### Key Stage 4

Pupils at Key Stage 4 follow the national curriculum for Computing and Information and Communication Technology. All pupils are taught to:

- Develop their capability, creativity and knowledge in computer science, digital media and information technology
- Develop and apply their analytic, problem-solving, design, and computational thinking skills
- Understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns

Pupils in key stage 4 are given the opportunity to obtain functional skills level 1 and 2 qualifications in Information and Communication Technology. These qualifications take the form of online examinations. The pupils are given a number of opportunities to sit these examinations throughout the year.

#### AQA Unit Awards

Unit Awards are offered to key stage 4 pupils who do not feel that Functional Skills is the most suitable route for them to take. Unit awards are completed in lessons over the course of the year and allow pupils to be rewarded with a certificate of achievement at the end of each unit. Nominally we would expect pupils to complete 6 AQA units per year.

#### Computer Safety

Pupils in Clifford Holroyde are monitored constantly to ensure that they are using the equipment in school in the correct manner. To help to reinforce this each year the pupils will undertake a unit of work which focuses on ensuring that pupils have an understanding of how dangerous the digital world can be. The pupils are taught how to use technology in the correct way to minimise the danger they are in.