COMPUTING and ICT

Intent – What do we learn and why?

The core purpose of studying Computing and ICT at Chosen Hill, and what we want students to gain from it, can be summarised in two statements:

Computing and the use of ICT is central to the education of all children because they will be required to use technology, throughout their education and on into work.

> *"Technology has forever changed the world we live in. We're online, in one way or another, all day long. Our phones and computers have become reflections of our personalities, our interests and our identities. They hold much that is important to us."*
>
> **James Comey**

Students should have the opportunity to apply and develop their technological understanding and skills across a wide range of situations and tasks to allow them to deal with technology issues outside of education.

A high-quality computing education equips students 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. The core of computing is computer science, in which students are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, students are beingequipped to use information technology to create programs, systems and a range of content. Computing also ensures that students become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for use in future workplaces and as active participants in a digital world.

Implementation – How is the curriculum planned?

The Chosen Hill Computing and ICT curriculum is planned at three levels to meet our stated intent. Long term planning comprises Curriculum Maps (Documents 1&2) showing an overview of all topics covered for Computing, KS3 ICT and Creative iMedia, roughly by half term period, in each year group along with their key assessment points. At foundation level individual Schemes of Learning show the key learning outcomes for the unit, each with clear links to the National Curriculum Programme of Study. Topics have been carefully chosen to allow as broad an understanding of the subject as possible for those who do not continue at GCSE level beyond Year 9, while at the same time providing a sound foundation of knowledge and skills for those progressing to pathways and beyond. We believe it is essential for students studying Computing and ICT at foundation level to get as clear an idea of the level of application and academic rigour required for GCSE success before they make their options choices, to allow them to make as informed a selection as possible. These are assessed using grade descriptors created from the Computing National Curriculum (Documents 3&4).

At GCSE we recognise that all classes have students with widely differing ICT abilities and skill sets, so we offer two pathways. We follow the academic pathway OCR Computing Science (J276) and the vocational pathway OCR Creative iMedia (J846) courses over three years. The OCR computing specification is engaging and practical, encouraging creativity and problem solving. It encourages students to develop their understanding and application of the core concepts in computer science. Students also analyse problems in computational terms and devise creative solutions

by designing, writing, testing and evaluating programs. The Creative IMedia specification equips students with the wide range of knowledge and skills needed to work in the creative digital media sector. They start at pre-production and develop their skills through practical assignments as they create final multimedia products.

At A Level we recognise that we have students with widely differing ICT abilities and skill sets, so we offer two pathways. The academic OCR Computing Science (H446) qualification helps students understand the core academic principles of computer science. Classroom learning is transferred into creating real-world systems through the creation of an independent programming project. Our A Level develops the students' technical understanding and their ability to analyse and solve problems using computational thinking. The vocational Pearson BTEC Nationals in ICT (601/7575/8) qualification provides students with a broad introduction into ICT that gives learners transferable knowledge and skills. The qualifications prepare learners for a range of higher education courses and job roles related to a particular sector. The qualification is designed for learners who are interested in a basic introduction to the study of IT alongside other fields of study. The students taking the BTEC ICT course should be interested in learning about creating IT systems to manage and share information, how Social Media work within a business environment and how to design websites for a given purpose

Assessment – How do we assess student understanding of Politics & Government?

In Years 7, 8 and 9 Computing and ICT uses a range of formative and summative assessment and feedback to assess students level of knowledge, understanding and skills, with the assessment method being appropriate to the objective and topic area, i.e. when students are writing code for a program you will ask them questions about the work to gauge their understanding (Formative), then when you mark their final work you will provide them with written feedback and possibly a grade (Summative). In addition to the work they produce, students complete a range of formal assessments, with GCSE grading (Documents 3&4).

At GCSE and A Level, Computing and BTEC ICT students have regular assessments that are put together using real exam questions and mark schemes to give the best possible practice for the exam style assessment they will face at the end of the course. This also allows students to see an accurate current working grade and recognise their areas of strength and areas for improvement, altering their study habits and revision strategies accordingly. Mock exams take place in Years 10-13, usually in the main school hall to again replicate the exam experience as closely as possible. At GCSE Creative iMedia students carry out practice assignments and the independently complete the official assignment. They are then marked using the official assessment criteria and students are awarded a grade. The students then have one opportunity to resubmit their assignment, to improve their grade, as shown in the AMF Policy (Documents 5&6).

Additional Information

Special Educational Needs
We teach computing to all students, whatever their ability, in accordance with the school curriculum policy of providing a broad and balanced education to all students. Teachers provide learning opportunities matched to the needs of students with learning difficulties. Different technologies are used to allow students with special educational needs to have access to the curricular materials and contribute to lessons.

Equal Opportunities
Ensuring equality of opportunity does not mean that all learners are treated the same. At Chosen Hill School, in accordance with the Learner's Act 1989, students are considered as individuals with particular needs and potentialities. Each student is given encouragement and the opportunity to develop their full potential in Computing and ICT, with appropriate support provided as necessary, whatever their gender, race, religious belief, cultural background or disability.

Home Learning

Home learning is an essential element of Computing Science and ICT used to support, consolidate and extend work covered in the classroom. It allows the promotion of independent learning skills as students apply skills to areas of personal interest, as well as encouraging research creativity and initiative. It will be set frequently and regularly, and will be appropriate to the topic and activities covered. In general, Foundation lessons will have the equivalent of 30 minutes a week, Pathway lessons 1 hour a week, and A Level lessons 2 hours a week in addition to directed study tasks in school. All tasks will be set and monitored through Show My Homework, and where possible will be clearly differentiated to provide meaningful and accessible activities for all students.

After school

As an additional layer of support, Computing/ICT staff are available until 4pm on Tuesday after school if there are any queries about work that students are undertaking as home learning.