

THE ICT AND COMPUTER SCIENCE CURRICULUM

The ICT department is a successful department with outstanding GCSE results. We keep up to date with the latest innovations and provide students with the opportunity to develop their ICT skills using a variety of different software. Students are encouraged to work independently and explore their own creativity.

Department Aims

- To develop essential ICT skills needed in future life.
- To create a safe and purposeful environment.
- To deliver a diverse and exciting curriculum.
- To develop skills using a variety of software.
- To ensure all students make progress.



We have five dedicated computer suites across the school. All timetabled ICT lessons are taught in one of these suites. There are good ICT facilities across the school including the use of laptops, tablets and Wi-Fi. The network is managed externally and all curriculum areas receive excellent support from ICT technicians.

The ICT and Computer Science curriculum is well established. We have been successfully delivering a GCSE equivalent course in ICT for over 10 years averaging 98% pass rates (level 2) for the vast majority of each cohort. We are continually looking for ways of enhancing and improving this provision. The department is complemented by exciting extra-curricular activities such as a coding and robotics club.

All GCSE courses and topics delivered at KS3 are well planned with detailed Schemes of Work. Students receive one hour per week of ICT at KS3 and KS4.

Keystage 3

Each topic at KS3 is designed to introduce new ICT skills, enhance existing skills and prepare students for GCSE.

The following topics are taught at KS3:

Year 7	Year 8
E-Safety	Building a Mobile Phone App
Web Design	Google SketchUp
Graphics	Graphics (advanced skills)
Kodu Programming	Python Programming

Keystage 4

ICT GCSE is a core subject. We currently deliver CiDA and Cambridge Nationals Creative iMedia across Year 9, 10 and 11.

CiDA

CiDA is a well-established GCSE and has been taught in the school for many years. The qualification is thoroughly enjoyed by students. It has been designed to engage and enthuse young people with an interest in creative computing, for example digital graphics and animations, interactive multimedia products and computer games. The qualification provides a broad and solid foundation for further study of various aspects of creative computing, such as graphic design, web design, computer games design and interactive media. Outcomes for this qualification have consistently been excellent.



CiDA Assessment

- The Level 2 qualification is worth one GCSE.
- 25% practical exam. Students are required to create a website in 2.5 hours.
- 75% coursework. Students design a series of graphic products and display their work on an e-portfolio.

Creative iMedia

Creative iMedia is an exciting new qualification, which aims to equip students with a range of transferrable skills such as research, planning, design and review. The qualification also challenges students to develop their creativity and independence while also providing a relevant insight into the way young people use technology in creative media.

Creative iMedia Assessment

- The Certificate qualification is worth one GCSE.
- 25% 1 hour 15 minute written exam.
- 75% coursework. Students are required to complete three units.

Computer Science GCSE

Computer Science is an Pathway subject which students can opt to do from Year 9. Computer Science students receive five lessons a fortnight.

Computer Science Assessment

- 100% exam. Students are required to complete two written exam papers.
- 20 hour compulsory programming task.

Computer Science is an extremely popular choice in our school, with ever increasing numbers of students opting to do this. The qualification aims to equip students with the following skills: coding, flow charts, binary, hex, storage, encrypting, truth tables, logic circuits, networks and communications, testing, security e.g. virus and prevention methods.

We have several parents who work for Microsoft and we run a robotics/weather balloon club outside of the curriculum for any interested students. This club has proved very successful and we are supported by an external engineer/software engineer in programming buggies and the software needed to transmit live pictures and sensor information including the GPS location of our weather balloon. The programming language we use is PYTHON and we have some extremely talented programmers.

All students have an introduction to PYTHON in Year 8 (turtle graphics) and our GCSE course is launched around creating an adventure game introducing the various command words and structures. After completion of this introductory module all students are given the chance to write their own programs and can use PYTHON, turtle graphics or even PYGAMES to create their code. This allows them to demonstrate their skills and for the more advanced students allows them to challenge themselves by extending their knowledge into areas like Pygame coding. Last year students achieved a level 9 GCSE grade and we are determined to challenge our students to attain the highest grades in this subject.

