

Computer Science Department		2025 update
Staff: A. Fovargue	Programming, Spreadsheets, Systems, Networking, Hardware & Software, Digital Art	
Subject Responsibilities:	KS4 Exam Board	KS5 Exam Board
KS3 / KS4 / KS5 Digital Efficiency	Pearson	No KS5 Provision currently

Priority Content:					
KS3 (Computing)					
Abstraction	Algorithms (Searching & Sorting)	Hardware & Software	Digital Artefacts		
Programming	Boolean Logic	Number Representation	eSafety	Networks	
KS4 (Computer Science)					
Architecture	Networks	Binary & Hex	Legal, Moral & Ethical	Data Representation	Systems
Programming & Practice	Compression	Problem Solving	Flowcharts & Pseudocode	Logic	
KS5 No Provision					

Curriculum Justification:	
Examination Subjects	
Yr10 & 11	Pearson introduced with first year 11's completing in 2025, good results with 40% 7-9 for those who fully engage. Switch to practical means significantly more emphasis is needed on programming. Additional 1 period in Year 10 is welcome as are double lessons, but still not enough time available for content to be delivered with enough practice and support. (5hrs 15 mins per fortnight - Yr10 / 4hrs 20 mins per fortnight - Yr11). New computers were provided for T5 which solved a lot (but not all - some have been introduced by technical support) of the issues.
Yr12 & 13	There is currently no KS5 provision. Numbers have never traditionally been high or consistent enough to justify the cost of running the course. Looking ahead, collaboration with Spalding Grammar School is likely and initial steps are currently taking place between school management to begin the process of collaboration.
Yr7	The Year 7 curriculum starts with setting up the students for their schooling with the set up of their user accounts, organisation of the systems and familiarising them with the school systems. This is to aid in the upskilling of all based on differing experiences in KS2. We use the History of Computing as the theme for these skills and background to the subject. The curriculum begins with Spreadsheets delivering fundamental skills on the most widely used piece of software in the world. The students work towards a complex assessment designed to develop their critical thinking, problem solving and data analysis skills alongside introducing them to skills and techniques critical in the modern world. After Spreadsheets, we move on to providing students with their first steps in to Python programming. Using the language that is the main focus for the rest of KS3 and in to GCSEs. Python is one of the most widely used programming languages in the world but provides a very simple user interface and is excellent for introducing students to more complex programming languages. Finally, we finish the year with basic Photoshop techniques. This is designed to provide cross-curricular benefits enabling the students to be able to create, modify and manipulate digital assets for use in all and any work through their whole school education.

Yr8

The year 8 curriculum has changed to better suit the new elements introduced in including Computing as part of their Technology choices at the end of Year 8. This will mean more dedicated students, rather than the whole year group with majority not wanting to study computing, and hopefully lead to an increase in those opting for GCSE. This should also mean they will be better prepared after Year 9.

Year 8 will now study the logic unit first, focusing on Binary & Hex, Characters & Colours and in introduction to sound and video. This is a unit that traditionally the majority quite like and do well in, so the plan is to start the year with something enjoyable and achievable.

Topic 2 will focus on Networks, looking at how internal computer systems are organised and run. Looking at the equipment and infrastructure needed to create and manage massive computer networks and how they impact us daily. Additionally we will look at Mobile phone networks and how Cellular systems work and how calls and data, cloud and worldwide usage works.

Topic 3 will be Python Programming but with the Turtle drawing functions. Again a unit that they enjoy and can achieve something with. Teaches a lot of coding basics and uses a lot of maths (Co-ordinates & Algebra) so will continue to fit well.

Yr9 Year 9 will now only have students who opted for computing. This gives much more scope to tailor the course for the GCSE and teach fundamental skills and areas that need boosting in preparation. As a result this curriculum has been modified in places to better cater for more dedicated students.

We will still begin with Programming as this is the fundamental skill that they struggle with and is 50% of the GCSE so bringing up their level is imperative. We spend a significant amount of the time available on this going over basics like variables, data types, selection, and iteration as well as introducing libraries, random generation and more detail with Turtle.

The remaining time will look at some aspects of AI, how it is being used, what are the implications, the catastrophic effects and how it can genuinely aid humanity, to let the students make their own judgements as to its place in the world.