



Key Stage 3

Year group:	Topics covered:					
Year 7	The Year 7 curriculum mixes new content with building on skills and understanding theoretically picked up throughout Key Stage 2. Units are mapped carefully against the National Curriculum and combine a mix of both ICT and Computer Science based topics. Each topic will also be revisited in later KS3 units to some degree, providing initial learning of some key concepts that will underpin a range of more advanced and complex lessons later on.					
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge	Correct use of the network and Office 365, E-safety and staying safe online		Computer hardware and software, data representation & visual programming		Using spreadsheets, programming small LED-based computers	
Skills	<p>School Network and Office 365 At the start of the year students are taught and reminded how to correctly and effectively use the school network. User areas are organised and tidied (in Years 8 and 9) and students are made aware of the various rules when using the local or online network resources. Office 365 OneDrive areas are organised, and a range of tasks ensure students are able to log in, access, save and share their work correctly.</p> <p>E-Safety This unit provides age-appropriate lessons on topics including staying safe online, social networking and grooming. Students are encouraged to challenge stereotypes and question common misconceptions to gain a full understanding of how the Internet can be used safely. This builds on prior learning of skills in Office applications and effective Internet searching skills which will carry through to all future units of work. Lessons are sequenced in such a way that students have all the base knowledge required to complete the more detailed and in-depth content later in the unit. This learning will be reinforced in both year 8 and 9 when they complete the other e-safety units.</p> <p>Introduction to Computers This unit covers computer hardware and software, including input, output and storage devices. Students will find out how various elements of a computer system work, recognise the importance of embedded systems and find out why certain storage methods may be better than others for different requirements. This works as a precursor to later units about data processing and binary and enhances students' understanding of just how wide reaching computer systems are. This unit is heavy in substantive learning but also enables future learning to take place with a better understanding than if they were to go into later units "blind". Lessons are sequenced in such a way that students are introduced to the concepts of what a computer system is, then more advanced topics follow on about specific elements of a system, building on their initial understanding of input, output and storage devices. This is a topic covered in the Computer Science GCSE and underpins a lot of the hardware topics.</p> <p>Data Representation and Scratch A mix between programming and binary calculations, students will firstly learn how to use a range of advanced programming techniques in Scratch to develop projects independently. They will then find out how computers process data, how computers use binary and learn how to convert and calculate binary into other forms of data. These are then combined to create a binary converter in Scratch. This follows on from knowledge they will have completed during Key Stage 2, where most primary schools in the area use Scratch to teach some initial programming skills. This unit takes that prior knowledge and builds new and more advanced programming techniques, with a stronger focus on what the techniques themselves are as opposed to how they work in Scratch (such as conditions, loops, variables). This knowledge is then put to use with a series of programming tasks which promote independence and experimenting and provide a sense of great satisfaction for the students when their final products are completed.</p>					



	<p>Spreadsheets Students are introduced to the purpose and concept of a spreadsheet. They learn simple and complex formulas, formatting methods and a series of more advanced functions, chart options and conditional statements. Some of this is supported by the programming skills taught in the previous unit, and the layout and formatting options can be utilised in a variety of other applications. The spreadsheets skills themselves will be used if the student chooses to continue with IT for KS4, with a large proportion of the KS4 coursework being spreadsheet-based. This also allows them to understand the idea of a computerised model simulating real world situations, which is on the GCSE CS specification.</p> <p>BBC Microbit Programming This takes the programming skills used and taught in the Scratch lessons and puts them into a different scenario, allowing students to adapt their skills into a new situation. This time students are programming an array of LED lights on a small physical computer which they can connect to the PC and copy their programs onto. This gives a more physical version of programming and lets them try out some physical characteristics of a device such as an accelerometer and button presses.</p>					
Assessment	Each unit has Go Green lessons whereby students use marked work to improve or deepen the work that has been completed. Unit assessments are also carried out at the end of each unit of work, which again feed into a lesson allowing students to carry out specific tasks depending on how well they did in various sections of the assessment. Summative assessment is also provided during lessons as part of general class teaching, with feedback provided on work completed in books, on the computers and discussions carried out as a class or with an individual.					
Year 8	The topics covered in Year 8, which again are mapped carefully to ensure the NC objectives are met, cover a more theoretical series of units while still ensuring practical skills are being developed and improved. The networking and bigger picture units give a stronger lean towards Computer Science, with web design and computing heroes focussing more on IT related skills and knowledge.					
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge	Correct use of the network and Office 365, E-safety, cyberbullying, sexting and legal issues		What networks are, how they work with the Internet; legal, ethical and environmental issues of computing in the real world.		Designing and creating web sites; heroes of computing - research skills, questionnaires and data analysis	
Skills	<p>School Network and Office 365 At the start of the year students are taught and reminded how to correctly and effectively use the school network. User areas are organised and tidied (in Years 8 and 9) and students are made aware of the various rules when using the local or online network resources. Office 365 OneDrive areas are organised, and a range of tasks ensure students are able to log in, access, save and share their work correctly.</p> <p>E-Safety This unit provides age-appropriate lessons on topics including staying safe online, social networking and grooming. Students are encouraged to challenge stereotypes and question common misconceptions to gain a full understanding of how the Internet can be used safely. Building on the topics covered in Year 7, students focus on cyberbullying, sexting and legal ramification of the use of inappropriate Internet and social media use.</p> <p>Networking This unit deals with some more theoretical content, in line with the networking section of the GCSE CS specification. Students learn about what networks are and how they're used, how the Internet works with DNS servers and the World Wide Web. They also look at network security and encryption, giving them a strong understanding of how data is kept secure while being sent around a network or the Internet. All of these topics are taught as part of the Computer Science GCSE, and being a more theory, book-based unit will also give them practice in essential tasks such as note taking, summarising and answering exam-style questions.</p>					



	<p>The Bigger Picture Another unit pointed directly towards a section of the Computer Science GCSE, students will learn about a range of real world issues surrounding computing. These cover a range of legal issues and considerations, environmental concerns (and how the world of computing is helping) and ethical issues including Artificial Intelligence.</p> <p>Web Design and Development This unit is a far more practical unit, allowing students to research existing websites and analyse them in detail; this is a skill that will be revisited later this year and in Year 9. They will then go through the development cycle of planning, designing and creating a website. This development method will be used at numerous times, and is an important skill when it comes to producing digital products, something also done as part of the KS4 IT qualification. Use of HTML to create simple pages will also enhance knowledge and understanding of how web pages are displayed on the screen, building on the work done in the previous unit about how networks work.</p> <p>Heroes of Computing This unit refreshes a lot of skills learnt so far. Students will research a range of famous figures in the world of Computing (building on the research skills taught in Year 7 and practiced many times since), then develop questionnaires and analyse the results using spreadsheets (using spreadsheet skills from Y7, and building further towards work required in the IT KS4 qualification). Finally they will develop a magazine, which uses the development skills taught in the previous unit, while also building up physical design ideas ready for Year 9.</p>					
Assessment	As in Year 7, each unit has Go Green lessons whereby students use marked work to improve or deepen the work that has been completed. Unit assessments are also carried out at the end of each unit of work, which again feed into a lesson allowing students to carry out specific tasks depending on how well they did in various sections of the assessment. Summative assessment is also provided during lessons as part of general class teaching, with feedback provided on work completed in books, tasks completed using the computers and discussions carried out as a class or with an individual.					
Year 9	Our Y9 curriculum offers a broad range of topics from different strands of what our department can offer. As well as continuing the IT and Computing topics, there is also a Business Studies-based enterprise unit and a Media Studies unit on movie posters, allowing students to complete KS3 having comfortably met the NC objectives and also experienced some additional breadth and variety in the topics covered.					
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge	Correct use of school network and Office 365, e-safety including photo sharing, social media and propaganda		How businesses are created successfully, promotion and advertising. How movie posters are developed, theory behind the key concepts and creating their own using specialist software		Text-based programming, use of programming concepts in a new programming environment. How magazine covers are developed, design concepts and developing covers themselves.	
Skills	<p>School Network and Office 365 At the start of the year students are taught and reminded how to correctly and effectively use the school network. User areas are organised and tidied (in Years 8 and 9) and students are made aware of the various rules when using the local or online network resources. Office 365 OneDrive areas are organised, and a range of tasks ensure students are able to log in, access, save and share their work correctly.</p> <p>E-Safety This unit provides age-appropriate lessons on topics including staying safe online, including social networking selfie sharing and how to spot the use of propaganda online. Students are encouraged to challenge stereotypes and question common misconceptions to gain a full understanding of how the Internet can be used safely.</p>					



	<p>Enterprise & Promotion This is a Business Studies unit, where students will learn about how successful businesses are created, and what it means to be an entrepreneur. They will learn how to promote a product or service, how successful organisations combine several elements to drive sales and interest, and have the opportunity to develop their own mock products and promotions. The ideas behind the promotional aspects lead into the next unit of work.</p> <p>Film Posters Moving into Media Studies, this builds on the previous unit’s work about promotion and focusses on the idea of film posters. Students develop the skills to recognise a range of elements on a film poster and how these have been used to create an effective promotion for the film. They also develop their own ideas, see how teaser posters and final versions work together, and how all of this works alongside the film itself. This also links in with the design work carried out in Year 8, and the development cycle covered several times before.</p> <p>Programming in Python Students learn how to take the programming skills learnt in previous years and use this in a text-based programming environment. These skills, that will become vital if they take GCSE Computer Science, will build on prior knowledge from Year 7 and 8 and give them exposure to “proper” programming after using some more visual based tools in the past.</p> <p>Magazine Covers Another Media-based unit, students analyse existing magazine covers with a focus on gender and ethnic balance. They will then, again, use their design skills by using the development cycle methods they have used numerous times by now. The learning from the film poster unit will be brought into this as they adapt their prior learning to develop new skills in terms of developing magazine covers that are appropriate for a range of requirements.</p>
Assessment	<p>As in previous years, each unit has Go Green lessons whereby students use marked work to improve or deepen the work that has been completed. Unit assessments are also carried out at the end of each unit of work, which again feed into a lesson allowing students to carry out specific tasks depending on how well they did in various sections of the assessment. Summative assessment is also provided during lessons as part of general class teaching, with feedback provided on work completed in books, tasks completed using the computers and discussions carried out as a class or with an individual.</p>
Assessment:	How Will I be assessed at Key Stage 3?
	<p>As outlined in the individual year groups above, each unit throughout KS3 has a final assessment which leads into further opportunity to improve required skills and understanding, with the aim of filling any gaps lingering at the end of the units. Work is assessed both summatively and formatively throughout lessons, with regular verbal feedback during practical tasks, and regular “Go Green” marking allowing students to ensure that gaps are closed off before too much time has passed.</p>