Year 7			**Form of knowledge**	**How this links in with expected and current GCSE and A-Level courses.**
Orientation and Key Skills	Introduction to Using Computers at Huntington School	Using a range of software- / E-Saftey and physical safety / Using Hardware / School emails	Procedural knowledge: Knowing how to	Cross curricula & essential for all students.
E-Safety	Y6 Students Website	E-Safety HTML/Analysing data/Use Digital Artefacts/ Range of software/ MS word & fireworks / Logical thinking	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	Cross curricula & essential for all students.
Digital Media Sketch up	Y7-Y11 Students Classroom	(Digital Artefacts)(Range of Devices)(MS word & fireworks) (meet needs of users)	Procedural knowledge: Knowing how to	GCSE iMedia & GCSE Computer Science
Gaming Programming	Scratch driving game	Basic Modular programs – creating characters Poster for – Road safety – Stay on road.	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science
Small Basic	Developing Computational thinking	Beginner Programming language / Core concepts of computing/ Fundaments of Syntax based language / Introduction to IDE	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science & A-level Computing

Year 8			**Form of knowledge**	**How this links in with expected and current GCSE and A-Level courses.**
Orientation and Key Skills	Review and set up of Y8 file handling and use of software / Hardware	Using a range of software- / E-Saftey and physical safety / Using Hardware / School emails	Procedural knowledge: Knowing how to	Cross curricula & essential for all students.
Sequencing & control Programming	Sequencing	Real world problems. Algorithms. Logical reasoning. Developing modular programs.	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science & A-level Computing
Spreadsheet Design, Hardware & data, Representation	Cupcake Business	Hardware / Data representation / Manipulation of Data	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science & iMedia & AS Applied A-level & A-Level Computer Science
App Development	Anti- bullying, Developing Computational thinking	(Digital Artefacts) MS word & fireworks) Computational Abstracts. Key algorithms. Modular programs. Alternative algorithms.	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science & iMedia & A Applied A-level.
HTML- Country Website	Creation of a website	Develop understanding of HTML and CSS for website development.	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science A-Level Computer Science
Digital Graphics	Understanding of and Creation of Digital Graphics	Photo image editing. Creating Graphics to a brief. Video. Combine software applications. Using Assets / legislation.	Procedural knowledge: Knowing how to	iMedia & Applied A-level

Year 9			**Form of knowledge**	**How this links in with expected and current GCSE and A-Level courses.**
Orientation and Key Skills	Review and set up of Y9 file handling and use of software / Hardware	Using a range of software- / E-Safety and physical safety / Using Hardware / School emails / Essentials of file handling	Procedural knowledge: Knowing how to	Cross curricula & essential for all students.
Python Programming	Developing Computational thinking / Creating programs / Solving problems	Computational Abstracts. Key algorithms. Modular programs. Alternative algorithms. Development of Programming skills and computational thinking.	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science & Applied A-level & A-Level Computer Science
Hardware & data Representation	Understanding Computing	Boolean logic – Circuits & programing Binary. Computers, Networks & Software Data types.	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science & Applied A-level & A-Level Computer Science

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Digital Graphics	Digital graphics design using Adobe	Photo image editing. Creating assets. Video. Combine software.	Procedural knowledge: Knowing how to	Creative iMedia & Applied A-level
Real world computing	Careers and ICT in the World	Introduction to careers through computing / E-Safety / Computation concepts	Declarative knowledge: understanding	GCSE Computer Science A-Level Computer Science
Data Representation	Database and Spreadsheets	Hardware / Data representation / Manipulation of Data	Declarative knowledge: understanding Procedural Knowledge: Knowing how to	GCSE Computer Science & iMedia & Applied A-level & A-Level Computer Science
Physical Computing	Physical Computing BBC Microbits- Computer Systems	Hardware / Software / Programming	Declarative knowledge: understanding Procedural knowledge: Knowing how to	GCSE iMedia & GCSE Computer Science
Artificial Intelligence	AI- Its uses and applications	Real world problems. Algorithms. Logical reasoning.	Declarative knowledge: understanding Procedural knowledge: Knowing how to	GCSE iMedia & GCSE Computer Science

	Key Stage 3
Algorithms	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 (e.g. searching and sorting) Use logical reasoning to compare the utility of alternative algorithms for the same problem
Programming	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 (e.g. lists, tables or arrays) Design and develop modular programs that use procedures or functions
Hardware / Data representation	Understand simple Boolean logic (e.g. AND, OR and NOT) Understand some of Boolean logic's uses in circuits and programming Understand how numbers can be represented in binary and be able to carry out simple operations on binary numbers (e.g. 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
Digital Media	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
eSafety	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

Marking and Assessment for Computer Science:

Term	Year 7	Year 8	Year 9
Autumn term 1	Orientation Two star and a wish the favourite place task	Sequencing Sequencing instructions: Flow chart feedback	Python Baseline Assessment
Autumn term 2	E - Safety Assessment week – Cyberbullying scenarios	Spreadsheets W/C Assessment Week – final spreadsheet Task	Careers & ICT in the World
Spring term 1	Key Skills Assessment	App Builder Design Assessment	Digital graphics In the real world: Assessment weeks- Artwork, skills log and visualisation diagram
Spring term 2	Scratch 1 Assessment Week 8/9 Game	App Builder Development / Programming Assessment	Understanding computers Assessment MCQ and knowledge
Summer term 1	EOY Assessment	HTML Website assessment	Physical Computing Assessment
Summer term 3	Sketch Up- Designs	EOY Assessment	EOY Assessment

How can parents/carers support their child at KS3 Computer Science?

Year 7	Year 8	Year 9
1. Computer Science and ICT is all around us- shopping, medical science, travelling. If you can, try to provide opportunities for your child to use a wider range of information communication technology, such as keyboards, remote control devices, recording equipment or even doing the shopping for you on the internet (although you may want to enter your card details yourself!). 2. Encourage your child to make the most of the computer to improve the presentation of homework by using text, graphs, pictures, sound or video and so forth. Encourage your child to revisit knowledge and skills taught in class. 3. Encourage your child to respond to teacher feedback, making improvements to their work and catching up on anything missed. 4. Reading the following articles will reinforce and expand on the in class learning: • Technology - BBC News • https://elearningindustry.com/scratch-the-future-programming 5. Visiting the following that will support their learning of the topics covered in year 7: • Online safety activities for all ages from Childnet Get SMART | Childnet • Richard Smith (Amazing ICT www.amazingict.co.uk) is sharing a range of 'how to' videos on his website and YouTube channel https://www.youtube.com/user/poundten/videos • Scratch coding (with resources) https://scratch.mit.edu/ Useful 'getting started' guide here https://scratch.mit.edu/ideas • Range of coding puzzles and activities to support the 'Hour of Code'. https://code.org/	1. All of our year 7 materials are still useful to learn and review in year 8. If you can, try to provide opportunities for your child to use a wider range of information communication technology whenever an opportunity arises. 2. Encourage your child to make the most of the computer to improve the presentation of homework by using text, graphs, pictures, sound or video and so forth. Encourage your child to revisit knowledge and skills taught in class. 3. Encourage your child to respond to teacher feedback, making improvements to their work and catching up on anything missed. 4. Reading the following articles and books will reinforce and expand on the in-class learning: https://www.bbc.co.uk/news/technology-57670779 https://elearningindustry.com/scratch-the-future-programming https://techcommunity.microsoft.com/t5/small-basic-blog/small-basicresources-for-game-programming/ba-p/336702 5. Have a go on: Tynker. Encouraging children to create, code, make websites and design games. Free access to its premium service during the school closures. https://www.tynker.com/	1. All of our year 8 materials are still useful to learn and review in year 9. If you can, try to provide opportunities for your child to use a wider range of information communication technology. 2 Encourage your child to make the most of the computer to improve the presentation of homework by using text, graphs, pictures, sound or video and so forth. 2. Encourage your child to revisit knowledge and skills taught in class with software used in class. 3. Encourage your child to respond to teacher feedback, making improvements to their work and catching up on anything missed. Ensuring that they have mastered the key skills and core concepts of software that they will need for their GCSE courses. 4. Reading the following articles and books will reinforce and expand on the in-class learning: https://www.computerweekly.com/news/252510993/Top-10-technology-and-ethics-stories-of-2021 5. Visiting the following that will support their learning of the topics covered in year 9: Codecademy: Web development and data science skills activities. https://www.codecademy.com/projects https://projects.raspberrypi.org/en/pathways/python-intro

Generic learning to code in Scratch:	Generic learning to code in Python:
• https://projects.raspberrypi.org/en/pathways/scratch-intro • https://projects.raspberrypi.org/en/pathways/more-scratch • https://projects.raspberrypi.org/en/pathways/further-scratch	• https://projects.raspberrypi.org/en/pathways/python-intro • https://projects.raspberrypi.org/en/pathways/more-python

Homework Policy for Computer Science:

Key Stage 3
Frequency: Generally no homework tasks are set for ICT and computing however tasks may be set as and when appropriate related to the learning objectives of each lesson by individual teachers. Tasks do not generally involve the use of ICT facilities: **Types of tasks:** ▪ Learning the spelling and key subject terminology. ▪ Research in preparation for future tasks e.g. what an input device is and where it is used. ▪ Learning and revision for class tests and examinations. ▪ Improvement and use of DIRT time to improve or develop set tasks.

Type and frequency of feedback by Key Stage: Computing/ICT

Key Stage 3
▪ All teachers will provide verbal feedback throughout projects. ▪ All teachers will mark extended written work to correct paragraphing, sentence structure and elements of punctuation plus spelling errors Peer assessment and self-marking is used where we deem it appropriate. ▪ The assessment marking grids are written in student speak, and will include conversations with students about attainment and how they can improve. ▪ In years 7, 8 and 9 we assess all project work with main areas being marked by staff (2s & W). All students should receive written feedback at least once a half term for year 7 and 9 and once a term for year 8. ▪ All students will be set an appropriate target for improvement for each module.