

Subject Computing

Year 8

Curriculum Overview



THE HART SCHOOL

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	Assessment 1			Assessment 2		
Core Course Topic: These topics are taught through the identified terms. They are taught in small bitesize chunks and revisited regularly.	Computer Crime Cyber Security	Computer Crime Cyber Security Graphic Skills	Graphics Skills	Computational Thinking Block Based Programming Representation Binary	Computational Thinking Block Based Programming Representation Binary	Network & the Internet -Html
Additional support links:	https://www.bbc.co.uk/bitesize/guides/znnny4/revision/1	https://www.bbc.co.uk/bitesize/guides/znnny4/revision/1	https://helpx.adobe.com/uk/photoshop/tutorials.html	https://studio.code.org/home	https://studio.code.org/home App Lab	https://studio.code.org/home
Knowledge: Included here is the specific knowledge your child will learn in detail	Be able to identify online criminal activity. Be able identify online security threats. Be able to recognise the signs of fraudulent emails.	Understand the principles of the computer misuse act. Be able to protect yourself online. Be able to protect personal data online.	Be able to recognise the difference between a Vector and a Bitmap graphic. Be able to identify file types and formats. Be able to appropriately format a digital graphic. Be able to recognise key tools and techniques for creating a digital graphic.	Be able to think algorithmically. Be able to understand decomposition and abstraction. Be able to convert binary. Be able to convert between hexadecimal and denary. Be able to add 2 8-bit numbers. Write an accurate, efficient algorithm without assistance for any given problem	To be able to understand the ASCII character set. Be able to convert ASCII code. Be able to recognise how images are stored in computer systems.	Suggest different methods or algorithms for routing and the effect these may have on network performance Understand the relationship between component network parts such as switches, routers, servers Effectively and consistently consider the nature of information found on the internet, its usefulness and appropriateness for their work across the curriculum, not just in ICT lessons Consistently and effectively make use of the different types of resources available on the internet for a given situation. Actively monitor their online presence and take any actions as necessary to ensure their use of online services are: Safe, Secure, Appropriate for all audiences and use with foresight and consideration of implications of their online actions in the future.
Skills: Included here is the specific skills your child will learn in detail	Laws and legal knowledge that is common across courses. Ability to discuss and apply legal knowledge.	Student will be able to protect their work and digital devices across the curriculum and life.	Editing and creating graphics for other subjects and courses.	Using abstraction and decomposition to make it easier to solve problems.	Understanding how computer memory and storage work, enabling students to manage this across their devices. Sequence, selection and iteration. Problem solving skills. Iterative and final testing.	Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems.
Common Lexicon: These are the key words and terms learnt. These can be found on knowledge organisers.	KS3 NC: 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.	KS3 NC: 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.	KS3 NC: create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability	KS3 NC: 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.	KS3 NC: 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.	KS3 NC: Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems.



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Ambition Curriculum Links:	Links to graphics due to files being stored online and online working.	Ability to apply knowledge of digital laws in any subject that is using digital platforms.	The knowledge leads into the iMedia curriculum and into the graphics curriculum offered. Links to Photography and graphics courses.	Link to Maths - able to apply computational mathematics.	Links to Photography and graphics courses - storing and compressing images.	Links to the computer science curriculum and maths for problem solving.
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