



Computing Curriculum Long Term Planning

COMPUTING KEY:

Computer Science:		Algorithms & Programming		Data		Systems
Information Technology:		Digital Artefacts		Computing Contexts		
Digital Literacy:		Device Operation		Searching / Refining information		E-Safety

YEAR 7 (1h p/week)		HT1	HT2	HT3	HT4	HT5	HT6
COMPUTING	Big Idea	Are you safe online when using the internet?	What is data and how do computers store it?	What are algorithms and flowcharts?	What is a computer system and what's needed to build one?	How do you program a Micro:bit computer to perform a task?	Can you digitally manipulate a photo in Photoshop?
	CS:						
	IT:						
	DL:						
	Application of Knowledge	SMART Rules Homework (SMHW) BEBRAS Challenge (Low-Stakes including both Big Ideas) Weekly recall Brain in Gears		Algorithms and programming key word test Homework (SMHW) Optional Computer Systems Poster Homework (SMHW) Application of Knowledge (Low-Stakes including both Big Ideas + Retrieval practice of HT1 & HT2) Weekly recall Brain in Gears		Final Project Design Homework (SMHW) Application of Knowledge (Low-Stakes including both Big Ideas + Retrieval practice of HT1, HT2, HT3, HT4) Weekly recall Brain in Gears	
	Wider Curriculum Links	SMSC - Online Safety outside of school. Anti-Bullying. How to report to CEOP, Childline and find information on ThinkUKnow. Developing discussion skills with ABC Oracy FBV - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world. Mutual Respect Tolerance of others	SMSC – Police Database, who has your data? Companies storing data. How is it stored Etc. FBV - Rule of Law: Data protection/ GDPR/ Useful life skills – Databases/employment	SMSC – Logical thinking and problem solving. Computers used to explore furthest reaches of the universe. Robotics and Automation in our lives. Ethics associated with this. Links to science, technology and engineering. Developing discussion skills with ABC Oracy	SMSC – Computer systems in our lives. From washing machine to mobile phone. Developing discussion skills with ABC Oracy	SMSC – Software development, from Facebook to Netflix. FBV - Rule of Law – computer misuse act	SMSC – Photo editing, wellbeing & mental health associated with manipulated images and comparing one's self to them. FBV - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world.
		Resilience, Growth mindset, Minecraft Club and CGDC (Computer Games Development Club). BEBRAS (Computational Thinking Competition), OUCC (Oxford University Computing Challenge) Unifrog for Careers.					



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YEAR 8 (1h p/week)		HT1	HT2	HT3	HT4	HT5	HT6
COMPUTING	Big Idea	Are you safe online when uploading videos to the internet?	How do you create algorithms in Python?	How and why do we have base 2, base 10 and base 16 number systems?	How do you collect and analyse data?	How do you make your own 3D game?	What is real and what is fake? How do you know?
	CS:						
	IT:						
	DL:						
	Application of Knowledge	SMART Rules Homework (SMHW) BEBRAS Challenge (Low-Stakes including both Big Ideas Y8 + Retrieval practice from Y7)		Assessment Cycle 1 Hard Learning Revision Homework (SMHW) Application of Knowledge (Low-Stakes including both Big Ideas + Retrieval practice of Y7 and Y8 HT1 & HT2)		Hard Learning Revision Homework (SMHW) Optional Game Cover Design (SMHW) (Low-Stakes including both Big Ideas + Retrieval practice of Y7 and Y8 HT1, HT2, HT3, HT4)	
	Wider Curriculum Links	SMSC - Online Safety outside of school. Video distribution, grooming and harmful sexual behaviour. How to report to CEOP, Childline and find information on ThinkUKnow. Developing discussion skills with ABC Oracy FBV - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world. Mutual Respect Tolerance of others	SMSC – Software helping people. Future of technology, programmers are life savers ThinkUKnow. Developing discussion skills with ABC Oracy FBV – Computer Misuse Act, Hackers, Viruses etc.	SMSC – Human use of number bases. IP addresses and MAC addresses. Colour codes HTML. Links to science, technology and engineering. Developing discussion skills with ABC Oracy	SMSC – Data collection introduction, use of excel in employment. FBV - Rule of Law: Viruses / Hackers and Computer Misuse Act. Developing discussion skills with ABC Oracy	SMSC – Software development, game engines. Creative use of programming skills. Biggest media sector currently and growing in the UK. FBV - Rule of Law – PEGI age ratings and content descriptors.	SMSC – Photo editing, Reliability of information, Deep Fakes, Fake news. FBV - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world.
		Resilience, Growth mindset, Minecraft Club and CGDC (Computer Games Development Club). BEBRAS (Computational Thinking Competition), OUCC (Oxford University Computing Challenge) CyberFirst Girls Competition, Unifrog for Careers.					



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YEAR 9 (1h p/week)		HT1	HT2	HT3	HT4	HT5	HT6
COMPUTING	Big Idea	How do you protect your online Identity?	How do you use Blender to create a 3D animation?	How do you make a website?	How do cybercriminals steal data, disrupt systems, and infiltrate networks?	How do you use Excel to handle data?	How do app developers create apps?
	CS:						
	IT:						
	DL:						
	Application of Knowledge	Assessment Cycle 1 SMART Rules Homework (SMHW) Optional 3D Blender Challenge Homework (SMHW) BEBRAS Challenge Application of Knowledge <i>(Low-Stakes including both Big Ideas Y9 + Retrieval practice from Y7+Y8)</i>		Hard Learning Revision Homework (SMHW) Application of Knowledge <i>(Low-Stakes including both Big Ideas + Retrieval practice of Y7, Y8 and Y9 HT1 & HT2)</i>		Hard Learning Revision Homework (SMHW) Optional Game Cover Design (SMHW) Application of Knowledge <i>(Low-Stakes including both Big Ideas + Retrieval practice of Y7, Y8 and Y9 HT1, HT2, HT3, HT4)</i>	
	Wider Curriculum Links	SMSC - Online Safety outside of school. Privacy, personal data, how companies use it., Malware, Ransomware, Cookies. Developing discussion skills with ABC Oracy FBV - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world. Computer Misuse Act, Hackers, Viruses etc.	SMSC – How animations are used in games, Films and other media sectors. CGI etc.	SMSC – HTML and CSS, popularity of web sites, can use free software, Colour codes HTML. Links to science, technology and engineering. Developing discussion skills with ABC Oracy	SMSC – Online Safety and data protection. Current threats/news articles. FBV - Rule of Law: Viruses / Hackers and Computer Misuse Act. Written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world. Developing discussion skills with ABC Oracy	SMSC – useful life skills, VLOOKUP's, Validation, Conditional Formatting and Cell referencing.	SMSC – App development UX and UI design, growth in industry sectors.
		Resilience, Growth mindset, Minecraft Club and CGDC (Computer Games Development Club). BEBRAS (Computational Thinking Competition), OUCC (Oxford University Computing Challenge) Unifrog for Careers.					



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The above big Ideas are compulsory in Y9. Pupils can also have the option to further deepen their knowledge and study GCSE Computer Science, BTEC Digital Information Technology, BTEC Creative Media Production (Film or Gaming pathways).

