Striving For Excellence Together
Year 8 Computer Science Curriculum Map

Key Concepts:	Staying safe online, computational thinking, understand how computers work, processing data and information, problem solving, programming.

8	Topics	Assessment	Key Concepts	Key Vocabulary	Our Pillars	Knowledge tracking
Topic 1	Digital Citizenship *(NC link: Digital Literacy)*	**Multiple Choice Quiz** – completed via Microsoft Teams. The quiz is self-marking and identifies any concerns regarding their internet safety.	Internet safety , Online grooming, Sexting Digital security , Social media	Grooming, sexting, social networking, reliability, privacy, cybersecurity.	Literacy and Oracy Life beyond School Diversity and Inclusivity	**Prior** << Y7 Digital Citizenship **Future** >> Y9 Cyber Security >> GCSE Cyber Security
Topic 2	Binary and Hexadecimal *(NC link: Data representation)*	**End of topic exam** – questions based on all chapters covered in this topic. Some short answer and some multiple choice,.	Understand how numbers can be presented in binary. Be able to carry out simple operations on binary numbers. Conversion between binary and decimal Understand the use of Hex in Computer Science	Binary, hexadecimal, binary shifts, digits, bits		**Future** >> Y8 Hardware >> Y9 Data representation >> GCSE Data representation >> Y9 Logic >> GCSE Logic
Topic 3	Computer Hardware *(NC link: Hardware/Software, IT)*	**End of topic exam** – questions based on all chapters covered in this topic. Some short answer and some multiple choice,.	Understand the hardware that makes up a computer system, and how they communicate with one another.	Computer systems, embedded systems, general purpose systems, motherboard, CPU, RAM, ROM, buses, Magnetic storage, solid-state storage.	Literacy and Oracy	**Prior** << Y8 – Topic 2 **Future** >> GCSE Hardware and Software
Topic 4	Computer Networking *(NC link: Hardware/software)*	**End of topic exam** – questions based on all chapters covered in this topic. Longer answers regarding choice of network for different scenarios.	Understand how systems communication with each other. Understand the different types of computer networks & topologies. Understand the different between wired and wireless networks.	Network, Topologies, Star, Bus, protocols, wireless, wired, switch / hub, server, internet, local area network, wide area network, personal area networks.	Literacy and Oracy Life beyond School	**Prior** << Y8 – Topic 3 **Future** >> GCSE Networking
Topic 5	Computational Thinking & Programming *(NC link: Computational thinking and programming)*	**End of topic exam** – questions based on all chapters covered in this topic. Some short answer and some multiple choice,.	Focus is on the use of strings in code including storing, substrings, concatenation. The use of strings within sequencing and iteration	Strings, indexing, substring, variables, concatenation, selection, iteration (count control and condition control).	Literacy and Oracy Life beyond School	**Prior** << Y7 – Topic 2 & Topic 4 **Future** >> Year 9 coding >> GCSE coding and algorithms