Striving For Excellence Together
Year 7 Computer Science Curriculum Map

Key Concepts:	Introduction to school network, staying safe online, computational thinking, understand how computers work, processing data and information, being creative, problem solving.

7	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 , Reliability of online content, Password, Digital security ,Social media	Grooming, social networking, reliability, privacy, cybersecurity, hacking.	Literacy and Oracy (Poem creation) Life beyond School	**Future** >> Y8 Digital Citizenship >> Y9 Cyber Security >> GCSE Cyber Security
Topic 2	Algorithm and Computational Thinking *(NC link: Computational thinking)*	**Key Terminology Test** – students are tested on the key terminology for this topic as well as being able to identify errors within algorithms.	Understanding algorithms Identifying errors Problem solving Sequencing events / identifying important information / discarding irrelevant info. Using BBC Microbit	Computational thinking, algorithms, decomposition, abstraction, sequencing, selection, iteration. Microbit	Diversity and Inclusivity Literacy and Oracy (writing algorithms)	**Future** >> Y7 - Encryption >> Y7 – programming >> Y8 – Algorithms / Coding >> Y9 – Coding >> GCSE Computational thinking
Topic 3	Encryption and Code Breaking *(NC link: IT & Computational thinking)*	**N/A** This is a small unit of 4 lessons and focuses on developing problem solving skills, whilst working in a team. The teams complete in a house competition. Individual assessments are not taken.	Problem solving Diversity (Alun Turing) Team working including house competition	Cryptography, Encryption, Cipher, Algorithms, Equality	Diversity and Inclusivity Life beyond School	**Prior** << Y7 – Topic 2 **Future** >> GCSE Cyber Security >> GCSE Encryption
Topic 4	Programming (Introduction to Python – coding concepts) *(NC link: Programming)*	**Written Class Exam** – students complete a set of questions which test their understanding of programming concepts.	Solving computational problems Making use of coding constructs Design and develop programs. Logical thinking Problem solving	Algorithms, decomposition, sequencing, abstraction, variables, data types, selection, iteration (count-control), arithmetic operators, relational operators. Programming. Else, Elif, Syntax	Literacy and Oracy	**Prior** << Y7 – Topic 2 **Future** >> Y8 – Coding >> Y9 – Coding >> GCSE Coding
Topic 5	Information and Spreadsheets *(NC link: information technology)*	**Practical Exam** – students complete a spreadsheet which is then printed at the end of the lesson for marking.	Collecting and analysing data Presenting data Diversity and trustworthiness	Cell reference, format data, formulas, SUM, MIN and MAX, filter, Data, Information, reliability, fake news, trustworthiness	Diversity and Inclusivity Literacy and Oracy	**Prior** << Y7 Topic 1 **Future** >> Y9 – Databases >> GCSE – Databases and SQL