Long Term Curriculum Plan

Curriculum Intent

"Computational thinking is a fundamental skill for everyone, not just for computer scientists."

Wing, Jeannette. (2006). Computational Thinking. Communications of the ACM. 49. 33-35.

Computational thinking is more than simply programming – it involves solving problems, designing systems, and understanding human behaviour, by drawing on the concepts fundamental to computer science.

- This is the fundamental transferable skill gained by studying Computer Science.
- Every pupil in the school will gain skills in computational thinking at KS3 that will allow them to succeed in the future.
    - Whatever subjects they choose at KS4 & KS5.
    - Whatever career path they choose.

For those that do choose Computer Science as an option at KS4 and beyond:

- Strong focus on programming and algorithmic problem solving beyond that taught in other schools.
- This is the key to accessing higher grades.
- OCR 2023 Exam Feedback webinar made it clear that schools that offer a substantial programming element produced the best results.

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5 year roadmap	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 7	IT Skills (Assessment)	Cyber Security (Assessment)	Spreadsheets (Assessment)	Flowol (Assessment)	FMS Logo (Assessment)	App Development
Year 8	Small Basic (Assessment)	Small Basic (Assessment)	Small Basic Graphics (Assessment)	Computer Theory	Computer Theory (Assessment)	HTML & Web Design
Year 9	2.2 Programming Fundamentals (Assessment)	2.2 Programming Fundamentals (Assessment)	2.2 Programming Fundamentals	Pair Programming Coding Challenge (Assessment)	2.1 Algorithms 2.3 Robust Programming (Assessment)	Coding Challenge
Year 10	1.1 Computer Systems 1.2.3 Units 2.4 Boolean Logic (Assessment)	1.2.1-1.2.2 Primary and Secondary Storage 1.2.4 Data Storage	Coding Challenge 1.5 System Software (Assessment)	1.2.5 Compression 1.3.1 Networks 1.4 Network Security	1.3.1 Networks 1.4 Network Security (Assessment)	2.2 Programming Fundamentals Revision
Year 11	Revision of Years 9 & 10	1.6.1 Ethical 1.3.2 Wired and Wireless Networks	2.2.3 SQL 2.5.1 & 2.5.2 Translators and IDEs	Revision	Revision	

Sixth form roadmap	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
YEAR 12	2.2.1 Programming Techniques (Assessment)	1.4 Data Types, Data Structures and Algorithms 1.1 Processors, Input, Output and Storage Devices (Assessment)	1.4 Data Types, Data Structures and Algorithms 1.2 Software and Software Development	1.4 Data Types, Data Structures and Algorithms 1.2 Software and Software Development (Assessment)	1.4 Data Types, Data Structures and Algorithms 1.2 Software and Software Development	2.3.1 Algorithms 1.3 Exchanging Data (Assessment)
YEAR 13	Coursework 1.3 Exchanging Data (Assessment)	2.3.1 Algorithms 1.5 Ethical	2.1 Computational Thinking 2.2.2 Computational Methods	Revision	Revision	