Curriculum Narrative

Subject: *Computing*	**Year:** *7*	**Author:** *N. Ogu*

Key Knowledge *Students will know*	**Key Skills** *Students will be able to*
Key Threshold Concepts: Year 7 Computing establishes the foundations for safe, confident and critical digital participation. The curriculum introduces essential knowledge that underpins all later KS3 and GCSE Computing. Students will know: • How online behaviour shapes digital footprints, and how social engineering and malware exploit human behaviour. • How computer systems process and store data, including CPU function, memory, binary representation and the distinction between hardware and software. • How computational thinking supports problem-solving through decomposition, abstraction, pattern recognition and algorithm design. • How control systems operate using flow-based logic and how instructions can be modelled, structured and executed.	**Subject Skills:** ***By the end of Year 7, students should be able to:*** • Apply safe online decision-making strategies and evaluate risks. • Convert denary to binary and explain outputs of simple logic gates (AND, OR, NOT). • Break down a problem using decomposition and design clear flowcharts using standard symbols. • Create and simulate basic control systems in Flowol using sequencing and decision structures.

Subject Specific Knowledge and Sequencing:	**Prerequisites and Spiral Teaching:**
1 lesson each two-week cycle • **Term 1:** Focus on digital literacy and online safety. Students explore responsible behaviour, cyber threats, digital footprints and social engineering. This term ensures students have secure foundations in safe practice before moving into technical content. • **Term 2:** Introduces core computer science principles including binary, computer architecture, logic gates, and hardware vs software. Topics are sequenced from concrete to abstract to reduce cognitive load. • **Term 3:** Develops computational thinking and control systems. Students use Flowcharts and Flowol to design	• Students build on key digital skills and vocabulary developed in KS2 Computing. • Retrieval practice at the start of each lesson reinforces prior knowledge and deepens long-term retention. • Key concepts (input–process–output, data representation, sequencing) are revisited across the year to strengthen understanding. • Portfolios provide ongoing assessment evidence and inform targeted intervention for misconceptions. **Cross-Curricular Knowledge Links** • **PSHE**: Digital resilience, online conduct, managing influence and peer pressure.

algorithms, simulate processes and apply knowledge from previous terms. This sequencing is deliberate: e-safety (low abstraction) to systems (medium abstraction) to algorithms and control (higher abstraction).	• **Maths**: Number bases, logic, sequencing, and problem decomposition. • **Science/DT:** Inputs/outputs in control systems, sensors, automation and simple physical computing links.
Reading Lists / Sources / Reading around the subject recommendations:	
• National Centre for Computing Education (NCCE) — accessible explanations and KS3-aligned resources • ThinkUKnow e-Safety — guidance for understanding online risks and safe behaviours.	• Flogorithm & Flowol Tutorials — modelling, flowcharts and control systems • BBC Bitesize KS3 Computing — reinforcement of key threshold concepts through visual explanations.


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