Heamoor School
Computing – Subject on a Page

INTENT

At Heamoor School, our Computing curriculum equips pupils with the knowledge, skills and understanding required to thrive in a rapidly changing digital world. Through the Kapow Primary Computing condensed curriculum, we ensure clear progression from EYFS to Year 6 across Computer Science, Information Technology and Digital Literacy.

Our curriculum aims to ensure pupils:

- Develop computational thinking and problem-solving skills.
- Understand how digital systems work and how to apply this knowledge through programming.
- Use technology purposefully to create, organise, store and manipulate digital content.
- Become responsible, safe and respectful digital citizens.
- Build resilience, independence and confidence when debugging and improving digital outcomes.
- Are prepared for the next stage of education and life in a digital society.

IMPLEMENTATION

Computing is delivered weekly or as a block of lessons. It is structured around Kapow's condensed curriculum model. Learning is sequenced progressively, allowing children to build on prior knowledge and develop increasing depth of understanding.

Curriculum Structure:

- EYFS: Exploration of technology, simple algorithms, cause and effect, and safe use of devices.
- KS1: Introduction to algorithms, programming (block-based), digital creation, data handling and online safety.
- KS2: Advanced programming concepts (selection, repetition, variables), data analysis, networks, and digital systems.
- Units are blocked to allow depth and consolidation.
- Retrieval practice and key vocabulary are embedded in every unit.
- Online safety is revisited each term and embedded across all units.

Assessment is both formative and summative. Teachers use Kapow progression documents to assess against age-related expectations. Pupil voice, learning in books and observational assessment support judgement accuracy.

IMPACT

By the end of each key stage, pupils demonstrate clear progression in knowledge and skills:

- EYFS pupils confidently explore technology and understand basic cause and effect.
- KS1 pupils create simple programs, debug basic errors and use technology purposefully.
- KS2 pupils design, write and debug increasingly complex programs and evaluate digital systems.
- Pupils articulate how to stay safe online and understand digital responsibility.
- Work scrutiny shows clear progression in computational thinking and digital creativity.

Outcomes demonstrate that pupils acquire knowledge securely over time and are well prepared for secondary education.

Curriculum Map (Kapow Condensed Model)

Year Group	Autumn Term	Spring Term	Summer Term	Online Safety
EYFS	Computing Systems & Networks Using a Computer	Programming All About Instructions	Data Handling Introduction to Data	Embedded throughout
Year 1	Computing Systems & Networks Improving Mouse Skills	Programming 1 Algorithms / Commands (Unplugged) Creating Media Digital Imagery	Programming 2 Bee-Bots	Discrete Unit
Year 2	Computing Systems & Networks What is a Computer?	Programming 1 Algorithms & Debugging Data Handling International Space Station	Programming 2 Block Coding (MakeCode / ScratchJr)	Discrete Unit
Year 3	Computing Systems & Networks Networks	Computing Systems & Networks Journey Inside a Computer Creating Media Video Trailers	Programming Scratch	Discrete Unit
Year 4	Computing Systems & Networks Collaborative Learning	Programming 1 Further Coding with Scratch Data Handling Investigating Weather	Programming 2 Computational Thinking	Discrete Unit
Year 5	Computing Systems & Networks	Data Handling Mars Rover Creating Media	Programming Music Programming	Discrete Unit

	Search Engines	Stop Motion Animation		
Year 6	Computing Systems & Networks Bletchley Park & History of Computers	Data Handling Big Data Computing Systems & Networks Exploring AI	Programming Python	Discrete Unit

Progression of Skills (Aligned to Kapow Condensed Curriculum)

Year Group	Computing Systems & Networks	Programming (Computer Science)	Creating Media & Data Handling	Online Safety
EYFS	Recognise technology in the environment; names basic hardware; uses devices appropriately.	Follows simple instructions; understands cause and effect; begins to predict outcomes.	Uses simple digital tools to create content; sorts and categorise objects; records simple data.	Understands that devices must be used safely; knows to tell an adult if something worries them.
Year 1	Identifies main parts of a computer; develops mouse and keyboard control.	Understands that algorithms are instructions; creates simple programs; begins to debug errors.	Creates and edits digital images; saves and retrieves work independently.	Understands basic rules for staying safe online; knows not to share personal information.
Year 2	Explains what a computer is and identifies different types used in everyday life.	Designs simple algorithms; uses block coding; debugs programs with increasing independence.	Collects, presents and interprets simple data; creates structured digital content.	Recognise personal information; understands privacy and respectful communication online
Year 3	Understands how networks connect computers; identifies internal computer components.	Uses Scratch to create sequences; introduces repetition; debugs systematically.	Plans and creates digital media (e.g., video); organise and edits content effectively.	Identifies online risks; understands appropriate online communication and reporting concerns.
Year 4	Understands collaborative technologies and cloud-based	Applies repetition and logical reasoning;	Collects, analyses and presents data (e.g., weather);	Understands online reputation; demonstrates

	systems; explains how the internet enables sharing.	develops computational thinking skills.	selects appropriate tools for tasks.	responsible and respectful behaviour online.
Year 5	Explains how search engines rank results; understands digital systems and reliability.	Uses selection and variables in programs; develops logical structure and debugging skills.	Analyses data sets (e.g., Mars Rover); creates multimedia content such as stop-motion animation.	Evaluates online content for reliability; understands digital footprints and responsible sharing.
Year 6	Explains the historical development of computing (e.g., Bletchley Park); explores artificial intelligence and modern systems.	Writes and debugs more complex programs (e.g., Python); applies abstraction and decomposition.	Analyses large data sets; independently selects and evaluates digital tools for purpose.	Demonstrates secure online behaviours; understands cyber security, data protection and ethical technology use.