

Mandeville Primary School

Computing Progression Map (Year 1–Year 6)



Curriculum Intent

At Mandeville, we believe that Computing and the use of ICT is central to the education of all children. Through teaching Computing, we equip all our children to participate safely in the rapidly changing world, where work and leisure activities are increasingly transformed by technology and provide them with essential knowledge, vocabulary and skills that will enable them to participate responsibly and effectively in the digital world. We provide a wealth of learning opportunities, explicitly within our Computing curriculum and also across other curriculum subjects.

Computing Concepts and Threads

Computing Thread	How understanding develops across the curriculum
Computing Systems and Networks	Pupils develop an understanding of digital devices, computer systems and networks, progressing from recognising technology and understanding its purpose to explaining how networks and the internet enable communication and collaboration.
Programming	Pupils develop computational thinking by creating, testing and refining algorithms and programs, progressing from simple sequences to using repetition, selection, variables and decomposition to solve increasingly complex problems.
Data and Information	Pupils learn how data is collected, organised, interpreted and presented using digital technology. They develop confidence in selecting appropriate tools to represent and analyse information accurately.
Creating Media	Pupils use a range of digital technologies to create, edit and evaluate digital content including text, images, audio, animation, video and 3D models, selecting appropriate software for different purposes.
Digital Literacy	Pupils learn to use technology safely, respectfully and responsibly. They develop an understanding of online relationships, privacy, digital footprints, copyright and how to report concerns appropriately.
Computational Thinking	Pupils develop logical thinking through pattern recognition, abstraction, decomposition and algorithmic thinking, applying these skills across all areas of Computing.

Knowledge and Understanding Progression

Phase	Knowledge and Understanding
Year 1	Develop an understanding of technology and its role in everyday life (Technology Around Us). Create digital artwork and simple written content (Digital Painting, Digital Writing). Organise information by grouping data. Begin programming by creating, following and debugging simple algorithms using floor robots (Moving a Robot).
Year 2	Explain how information technology is used beyond school (Information Technology Around Us). Capture, edit and evaluate digital photographs and create digital music. Represent and

	interpret information using pictograms. Develop programming through designing, testing and debugging robot algorithms.
Year 3	Explain how digital devices connect within networks (Connecting Computers). Create animations and desktop publications. Collect, classify and interpret information using branching databases. Develop programming through sequencing and event-based programming using Scratch.
Year 4	Understand how the internet enables communication (The Internet). Record, edit and evaluate digital audio. Collect, organise and analyse information using spreadsheets. Develop programming through repetition in shapes and repetition in games.
Year 5	Explain how computer systems share information (Systems and Searching). Create vector graphics and produce digital videos. Organise and interpret information using flat-file databases. Develop programming using selection and physical computing with microcontrollers.
Year 6	Understand communication and collaboration through networks (Communication and Collaboration). Design and publish webpages and create 3D digital models. Use spreadsheets to model increasingly complex data. Develop programming using variables and apply programming knowledge to design, debug and evaluate increasingly sophisticated algorithms.

Computing Skills Progression

Phase	Computing Skills
Year 1	Identify technology, use digital devices independently, create simple digital content, organise information, write and debug simple algorithms and use technology safely with support.
Year 2	Select appropriate software for different purposes, create and edit digital media, represent data digitally, develop and debug algorithms and demonstrate safe, respectful online behaviour.
Year 3	Explain how digital systems work, create increasingly sophisticated digital media, interpret branching databases, design and debug event-based programs and evaluate digital outcomes.
Year 4	Use a range of software confidently, create and edit audio content, analyse data using spreadsheets, develop programs using repetition and explain how networks support communication.
Year 5	Select appropriate digital tools independently, create high-quality digital media, organise information using databases, develop programming using selection and physical computing and evaluate digital solutions critically.
Year 6	Design, create and evaluate digital solutions independently, model and analyse data effectively, develop sophisticated programs using variables, collaborate responsibly online and apply computational thinking to solve complex problems.