



Overview

At New Longton we provide a high-quality computing curriculum that inspires all pupils to succeed and excel in an increasingly technological world. We provide opportunities for pupils to become confident in the use of technology. The children are given opportunities to use a variety of resources and solve problems in creative ways which develops their resilience and character, helping them to become life-long learners. Our school draws some of its curriculum from Cornerstones, but this is underpinned by the National Curriculum

Our aims follow the National Aims which are that children

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Early Years teaching follows the EYFS Curriculum and lessons are planned to help children to recognise that a range of technology is used in places such as homes and schools and how to keep safe and act appropriately when using technology. They are taught to select and use technology for particular purposes.

In KS1 the children will be taught to understand what algorithms are and how they are implemented as programs on digital devices. They will also learn that programs execute by following precise and unambiguous instructions. They will be taught to create and debug simple programs and use logical reasoning to predict the behaviour of those simple programs. In lessons they will use technology purposefully to create, organise, store, manipulate and retrieve digital content and recognise common uses of information technology beyond school, using technology safely and respectfully, keeping their personal information private. They will be taught to identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

In KS2 pupils will be taught to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. They will be expected to use sequence, selection, and repetition in programs, working with variables and various forms of input and output.

Children will learn how to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Lessons will help them to understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration. They will also be shown how to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

Children will select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Throughout all subject areas, not just computing lessons they will use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact an appropriate adult.

Overview of Learning

KS1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Retrieving Images; Photography; Using Presentation Software		Drawing software; Algorithms; E-mail; Photo stories		Sending an e-mail E-safety	Digital Animations
Year 2	Digital Photography	Programming Using Presentation Software	Audio Recording	Presenting Information	Using Drawing Software E-safety	Creating and Debugging Programs & Algorithms Uses of ICT Beyond School Stop Motion Animation Digital Presentations

KS2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Coding	Using presentation software	Algorithms Flow diagrams Online research Using logical reasoning Graphics software Digital presentations	Web searches E mail	Presenting information E-safety	Creating spreadsheets Using presentation software
Year 4	Satellite mapping Using GPS devices 2D animation Online research	Digital recordings	Presenting information	Digital images Algorithms Videos	Programming Video editing Multimedia presentations E-safety	Collaborative databases and spread sheets Using logical reasoning Writing programs Effective online research Digital presentations
Year 5	Programming; stop-frame animation E-safety	Research & Presentation	Collecting, evaluating & presenting data & information		Research; Data Handling; Presentation E-safety	Digital Portraits; Data Logging; Online research
Year 6	Collecting, Evaluating and Presenting Information E-safety	Using Search Technologies; Using Presentation Software	Collecting, Evaluating and Presenting Information	Select, Use and Combine a Variety of Software; Photo Stories; E-safety	Animation E-safety	Programming Design; Write and Debug Programs

Assessment

As a school, we are moving towards age-related expectations rather than levels. This change means that children will be working on objectives that are appropriate to their skills level and yet still provide elements of challenge.

Through the use of 2Code, we can accurately track individual children's progress and actively differentiate to their needs. There are opportunities for creativity within this process too, children can create independent coding sequences.

Children will be assessed regularly on the other areas of the curriculum and their attainment across the key stage will be tracked.