

Through a range of computing experiences we aim to equip pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

We use a range of equipment to provide the children with a range of experiences. We have laptops in each Key Stage 2 classroom and a trolley of laptops in the main building for Reception and Key Stage 1 classes. The school is fully networked and wifi enabled. Every classroom has an interactive whiteboard and the use of iPads within the classroom is being developed.

Resources such as floor robots, recording devices, programming and coding activities, practical programming with lego, digital cameras and videos are all accessed by the children.

COMPUTING - KS1	COMPUTING – KS2
<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognise common uses of information technology beyond school</p> <p>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>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</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>

In order to ensure coverage and progression throughout the school, we use the Rising Stars Computing Scheme of Work.

	Programming	Computational thinking	Creativity	Computer networks	Communication/ collaboration	Productivity
	Planning, writing and testing computer programs for digital devices, from floor turtles to tablets	Some of the computer science foundations – particularly algorithms, logical reasoning and decomposing problems into smaller parts	Creating and refining original content using digital tools across a range of media	Using and understanding the internet, the web and search engines, effectively and safely	Making the most of computers and the internet for communicating with one or many, and working together on projects	Collecting and analysing data and information using computers; organising, manipulating and presenting this to an audience
Y1	Unit 1.1 We are treasure hunters	Unit 1.2 We are TV chefs	Unit 1.3 We are painters	Unit 1.4 We are collectors	Unit 1.5 We are storytellers	Unit 1.6 We are celebrating
Y2	Unit 2.1 We are astronauts	Unit 2.2 We are games' testers	Unit 2.3 We are photographers	Unit 2.4 We are researchers	Unit 2.5 We are detectives	Unit 2.6 We are zoologists
Y3	Unit 3.1 We are programmers	Unit 3.2 We are bug fixers	Unit 3.3 We are presenters	Unit 3.4 We are network engineers	Unit 3.5 We are communicators	Unit 3.6 We are opinion pollsters
Y4	Unit 4.1 We are software developers	Unit 4.2 We are toy designers	Unit 4.3 We are musicians	Unit 4.4 We are html editors	Unit 4.5 We are co-authors	Unit 4.6 We are meteorologists
Y5	Unit 5.1 We are game developers	Unit 5.2 We are cryptographers	Unit 5.3 We are artists	Unit 5.4 We are web developers	Unit 5.5 We are bloggers	Unit 5.6 We are architects
Y6	Unit 6.5 We are mobile app developers	Unit 6.2 We are project managers	Unit 6.6 We are marketers	Unit 6.1 We are app planners	Unit 6.4 We are interface designers	Unit 6.3 We are market researchers