Computing Key Skills Progression

	EYFS				KS1		LKS2		UKS2	
	Nursery	**Reception**			**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Skills	Early Learning Goal - Understanding the world: Technology 22 - 36 Months Seeks to acquire basic skills in turning on and operating some ICT equipment Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car 30 - 50 Months Knows how to operate simple equipment, e.g. turns on CD player and uses remote control Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images Knows that information can be retrieved from computers	Early Learning Goal - Technology 40 - 60+ months Completes a simple program on a computer Uses ICT hardware to interact with age-appropriate computer software	**Topics**		Online Safety Grouping and Sorting Pictograms Lego Builders Maze Explorers Animated Story Books Coding Spreadsheets Technology outside school	Coding Online Safety Spreadsheets Questioning Effective Searching Creating Pictures Making Music Presenting Ideas	Coding Online Safety Spreadsheets Touch Typing Email Branching Databases Simulations Graphing	Coding Online Safety Writing for different audiences Logo Animation Effective Search Hardware Investigators	Coding Online Safety Spreadsheets Databases Game Creator 3D Modelling Concept Maps	Coding Online Safety Spreadsheets Blogging Text Adventures Networks Quizzing
			Skills	**Computer Science**	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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.
				Information Technology	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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,	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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,	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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,	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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.	evaluating and presenting data and information.	evaluating and presenting data and information.	evaluating and presenting data and information.
Digital Literacy	Recognise common uses of information technology beyond school. 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.	Recognise common uses of information technology beyond school. 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.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Enrichment opportunities	Learning in computing is not limited to the use of iPads or Chrome-based equipment in a weekly lesson. Computing extends into other areas of the curriculum with children using computer technology in many English, maths and other lessons. The school also discusses cyber-bullying as part of PSHE lessons and Anti-Bullying Week. There are two extra-curricular Computing clubs for KS2 children to participate in.
SEND & Inclusion information	The following list is a set of approaches that teachers use to allow for 'Quality First Teaching' in the classroom to enable all children to access learning: - Instructions are given in small chunks with visual cues. - Activities and listening broken up with breaks for more kinaesthetic activities. - Classroom assistants planned for and used to maximize learning. - Using specialised equipment such as left-handed scissors, chubby pencils, pencil grips, coloured overlays, etc. - Children are given movement breaks. - Classroom furniture and groupings consider whether pupils with speech & communication needs can see visual prompts and the teacher. - Word walls are used to develop understanding of new vocabulary. - Talking buddies or similar used to encourage responses. - Personalise teaching where possible to reflect pupils' interests. - Using a camera to record evidence of learning. - Recording speech.
Aims	The national curriculum for computing aims to ensure that all pupils: ● 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.