



Computing: Key Stage 1

Computing: Key Stage 1			
	Algorithms	Create programs	Reasoning
	<i>Pupils should be taught to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</i>	<i>Pupils should be taught to create and debug simple programs</i>	<i>Pupils should be taught to use logical reasoning to predict the behaviour of simple programs</i>
Year 1	<ul style="list-style-type: none"> create a series of instructions and plan a journey for a programmable toy 	<ul style="list-style-type: none"> create, store and retrieve digital content 	
Year 2	<ul style="list-style-type: none"> understand that algorithms are used on digital devices 	<ul style="list-style-type: none"> write a simple program and test it 	<ul style="list-style-type: none"> predict what the outcome of a simple program will be (logical reasoning)



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	Using technology	Uses of IT beyond school	Safe use
	<i>Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital</i>	<i>Pupils should be taught to recognise common uses of information technology beyond school</i>	<i>Pupils should be taught to 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</i>
Year 1	<ul style="list-style-type: none"> • use a website and a camera • record sound and play back 	<ul style="list-style-type: none"> • talk about some of the IT uses in their own home 	<ul style="list-style-type: none"> • use technology safely • keep personal information private
Year 2	<ul style="list-style-type: none"> • understand that programs require precise instructions • organise, retrieve and manipulate digital content 	<ul style="list-style-type: none"> • know how technology is used in school and outside of school 	<ul style="list-style-type: none"> • know where to go for help if concerned.



Computing: Key Stage 2

Computing: Key Stage 2				
	Create programs	Develop programs	Reasoning	Networks
	<p><i>Pupils should 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</i></p>	<p><i>Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output</i></p>	<p><i>Pupils should be taught to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</i></p>	<p><i>Pupils should be taught 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</i></p>
Year 3	<ul style="list-style-type: none"> • write programs that accomplish specific goals 	<ul style="list-style-type: none"> • design a sequence of instructions, including directional instructions 	<ul style="list-style-type: none"> • discern when it is best to use technology and where it adds little or no value 	<ul style="list-style-type: none"> • navigate the web to complete simple searches
Year 4	<ul style="list-style-type: none"> • give an 'on-screen' robot specific instructions that takes them from A to B 	<ul style="list-style-type: none"> • experiment with variables to control models 	<ul style="list-style-type: none"> • make an accurate prediction and explain why they believe something will happen (linked to programming) 	<ul style="list-style-type: none"> • know how to search for specific information and know which information is useful and which is not
Year 5	<ul style="list-style-type: none"> • use technology to control an external device 	<ul style="list-style-type: none"> • develop a program that has specific variables identified 	<ul style="list-style-type: none"> • analyse and evaluate information reaching a conclusion that helps with future developments 	
Year 6	<ul style="list-style-type: none"> • write a program that combines more than one attribute 	<ul style="list-style-type: none"> • develop a sequenced program that has repetition and variables identified 	<ul style="list-style-type: none"> • design algorithms that use repetition and 2-way selection 	



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	Search engines	Using programs	Safe use
	<i>Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</i>	<i>Pupils should be taught to 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</i>	<i>Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</i>
Year 3	<ul style="list-style-type: none"> use a range of software for similar purposes collect and present information 	<ul style="list-style-type: none"> understand what computer networks do and how they provide multiple services 	<ul style="list-style-type: none"> use technology respectfully and responsibly Know different ways they can get help if concerned
Year 4	<ul style="list-style-type: none"> select and use software to accomplish given goals 	<ul style="list-style-type: none"> produce and upload a podcast 	<ul style="list-style-type: none"> recognise acceptable and unacceptable behaviour using technology
Year 5	<ul style="list-style-type: none"> understand how search results are selected and ranked 	<ul style="list-style-type: none"> combine sequences of instructions and procedures to turn devices on and off 	<ul style="list-style-type: none"> understand that they have to make choices when using technology and that not everything is true and/or safe
Year 6	<ul style="list-style-type: none"> be aware that some search engines may provide misleading information 	<ul style="list-style-type: none"> present the data collected in a way that makes it easy for others to understand 	<ul style="list-style-type: none"> Be increasingly aware of the potential dangers in using aspects of IT and know when to alert someone if feeling uncomfortable