



Computing Progression

	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"> Understand that algorithms are used on digital devices Create a series of instructions that 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 what algorithms are and how they are implemented as programs on digital devices Understand that programmes execute by following precise and unambiguous instructions 	<ul style="list-style-type: none"> Write a simple program and test it Debug simple programs 	<ul style="list-style-type: none"> Use logical reasoning to predict the behaviour of simple program
	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>
Early Years	<ul style="list-style-type: none"> Know that information can be retrieved from a computer Explore a range of technological toys. For example, input directions on a Bee-Bot or use real life objects such as cameras, mobile phones and remote controls Interact with age-appropriate software- Use a paint program on an iPad or IWB to draw a picture of someone who helps us 	<ul style="list-style-type: none"> Identify different types of technology within the school environment and at home- cameras, iPads, photocopier, television, microwave, washing machine etc. 	<ul style="list-style-type: none"> Understand the importance of staying safe on the internet and know who to talk to if something worries you
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 and respectfully Keep personal information private when using technology Know to ask for help if they feel unsure about any online content

	Using Technology	Uses of IT Beyond School	Safe Use
Year 2	<ul style="list-style-type: none"> Understand that programs require precise instructions Organise, retrieve and manipulate digital content Use technology purposefully 	<ul style="list-style-type: none"> Know how technology is used in school and outside of school 	<ul style="list-style-type: none"> Use technology safely and respectfully Keep personal information private when using technology Know to ask for help if they feel unsure about any online content

	Create Programs	Develop Programs	Reasoning	Networks
	<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>	<i>Pupils should be taught to use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</i>	<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>	<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>
Year 3	<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"> 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 Use logical reasoning to detect and correct errors in programs 	<ul style="list-style-type: none"> Navigate the web to complete simple searches
Year 4	<ul style="list-style-type: none"> Write programs that accomplish specific goals Design and create programs that use a sequence 	<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) Design and debug programs that accomplish specific goals 	<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 Combine sequences of instructions and procedures to turn devices on and off 	<ul style="list-style-type: none"> Analyse and evaluate information reaching a conclusion that helps with future developments Explain how some simple algorithms work and detect and correct errors in them. 	<ul style="list-style-type: none"> Understand the basic workings of computer networks including the internet
Year 6	<ul style="list-style-type: none"> Write a program that combines more than one attribute Work with variables 	<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 Solve problems in writing programs by decomposing them into smaller parts 	<ul style="list-style-type: none"> Understand the opportunities computer networks offer for collaboration

	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 • Appreciate how search results are selected 	<ul style="list-style-type: none"> • Understand what computer networks do and how they provide multiple services • Collect and combine information and data 	<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 • Is selective when using digital content 	<ul style="list-style-type: none"> • Understand the opportunities computer networks offer for communication. • Choose from a variety of software and internet services to accomplish given goals • Design and create content to accomplish a given goal 	<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 a variety of software to accomplish given goals on a range of digital devices • Design and create systems that accomplish given goals 	<ul style="list-style-type: none"> • Understand the importance of using technology safely, respectfully and responsibly • Identify a range of ways to report concerns about content and contact • 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 • Evaluate digital content discerningly 	<ul style="list-style-type: none"> • Present the data collected in a way that makes it easy for others to understand • Analyse and evaluate information and data 	<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