Skill Progression in Computing at Key Stage 1			
National Curriculum	• 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 • Use technology purposefully to create, organise, store, manipulate and retrieve digital content • 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.		
Year 1			Information technology
	I can understand that I need to keep safe when using digital technology. I am aware that information on the internet is available to other people. I can mention some of the ways in which IT is used to communicate beyond school. **E-Safety** I know to close the laptop lid or turn the tablet over if I find content, such as inappropriate images, which might disturb me or other children. I know to tell their teacher or their parents if this happens.	I can make programmable toy move by inputting a sequence of instructions. I can develop and record sequences of instructions as an algorithm. I can program a toy to follow an algorithm. I can debug my programs. I can predict how a program will work. I can break down a process into simple, clear steps, as in an algorithm.	I can log on to a computer I can use a mouse correctly. I can use a keyboard correctly. I can use different features of a video. recorder I can select and use appropriate tools. I can use simple sound recording equipment.

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Year 2			Information technology
	I can edit and format text in emails. I can create and deliver a short multimedia presentation. **E-Safety** I am aware of how to use games safely and in balance with other activities. I am aware of online safety issues when using email. I can use appropriate language in emails. I can search for information safely.	I can understand algorithms as sequences of instructions in everyday contexts. I can program a Sprite using sequences of instructions to implement an algorithm. I can create a simple program on screen to control a Sprite using a sequence of instructions to move it from one place to another. I can give logical explanations of what a program will do and explain why it does what it does.	I can store, organise and retrieve content on digital devices for a given purpose. I can use a digital camera or camera app. I can edit and enhance photographs. I can record information on a digital map. I can collect data using tick charts or tally charts. I can use simple charting software to produce pictograms and other basic charts.

Skill Progression in Computing at Key Stage 2			
National Curriculum	• 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 • 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 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.		
Year 3			Information technology
	I can use search engines to learn about a new topic. I can plan, design and deliver an interesting and engaging presentation. I can create my own original images. I can create a video slide cast of a narrated presentation. **E-Safety** I have a developing understanding of how the internet, web and search engines work. I have a developing understanding of how email works. I am gaining skills in using emails.	I can create an algorithm for an animated scene in the form of a storyboard. I can write a program in Scratch to create the animation. I can correct mistakes in animation programs. I can develop a number of strategies for finding errors in programs. I have an increasing knowledge of Scratch. I can recognise a number of common types of bugs in software.	I am gaining skills in shooting live video, holding the camera steady and reviewing. I can edit videos, add narration and set in/out points. I can search for and evaluate online images

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Year 4			Information technology
	I can write for a target audience using a wiki tool. I can use presentation software and video. I can use spreadsheets to create charts. **E-Safety** I understand some of the risks in using the web. I am becoming familiar with information sites such as Wikipedia, including potential problems associated with their use. I am aware of the responsibilities when editing other people's work.	I can develop an educational game using selection and repetition. I understand and can use variables. I am beginning to debug computer programs. I can design and make an on-screen prototype of a computer-controlled toy. I understand different forms of input and output. I can design, write and debug the control and monitoring program for my toy. I can use hyperlinks to connect ideas and sources. I can code up a simple web page with useful content, including using HTML tags.	I can use computer-based data logging to automate the recording of some weather data. I can analyse data, explore inconsistencies and make predictions. I can use one or more programs to edit music I can create and develop a musical composition, refining ideas through reflection and discussion. I can research for a purpose.

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Year 5			Information technology
	I am becoming familiar with blogs and I create a sequence of blog. I have an awareness of computer-generated art, in particular fractal-based landscapes. **E-Safety** I understand the need for private information to be encrypted. I can encrypt and decrypt messages in simple ciphers. I appreciate the need to use complex passwords and to keep them secure. I decide what information is appropriate when researching I understand how search engines select and rank results.	I can create original artwork and sound for a game. I can design and create a computer program for a computer game, which uses sequence, selection, repetition and variables. I can detect and correct errors in my computer game. I can use iterative development techniques (making and testing a series of small changes) to improve my game. I am familiar with semaphore and morse code.	I am developing my research skills to decide which information is appropriate. I understand some elements of how search engines select and rank results. I am developing a familiarity of a simple CAD (computer aided design) tool. I understand the work of architects and engineers working in 3D. I can explore and experiment with 3D virtual environments, developing my spatial awareness.

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Year 6			Information technology
	I can manage or contribute to large collaborative projects, facilitate using online tools. I can design and produce a high-quality print document. I can think critically about how video is used to promote a cause I can storyboard an effective advert for a cause. **E-Safety** I can research a location online using a range of resources appropriately. I can to argue their point effectively, supporting my views with sources. I can source digital media while demonstrating safe, respectful and responsible use. I can counter someone else's argument while showing respect and tolerance I can consider some ethical principles in designing AI systems.	I can control or simulate physical systems. I can thoroughly debug the program. I am developing the ability to reason logically about algorithms. I understand how key algorithms can be expressed as programs. I understand that some algorithms are more efficient than others for the same problem. I understand common algorithms for sorting and searching. I can train a neural net to classify images.	I appreciate that computer networks transmit and receive information digitally. I understand the basic hardware needed for computer networks to work. I understand key features of internet communication protocols. I can work collaboratively to shoot original footage and source additional content I understand how domain names are converted to numerical IP addresses. I can think critically about how video is used to promote a cause I can use a variety of software to present finding. I can use criteria to provide others with feedback on their work. I can train a neural net to classify images I can train a machine learning system to identify sentiments