



Progression of skills - Computing

National Curriculum

By the end of Key Stage 1 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
- 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.

	EYFS	Year 1	Year 2	End of key stage expectation
Uses of Information Technology		Can I name the parts of a computer?	Can I identify some examples of computers? Can I describe some uses of computers? Can I identify that a computer is a part of IT? Can I identify examples of IT? Can I sort school IT by what it's used for? Can I identify that some IT can be used in more than one way? Can I find examples of information technology? Can I sort IT by where it is found? Can I talk about uses of information technology?	



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			<p>Can I recognise common types of technology?</p> <p>Can I demonstrate how IT devices work together?</p> <p>Can I say why we use IT?</p> <p>Can I identify the choices that I make when using IT?</p> <p>Can I use IT for different types of activities?</p> <p>Can I explain the need to use IT in different ways?</p>	
Programming	<p>Can I use a variety of electronic toys in play situations (dance mats, Bee-Bots, remote controlled toys) using basic directional language?</p> <p>Can I explore toys that simulate control devices e.g. traffic lights, scanner, microwave, cash tills?</p> <p>Can I explore the commands needed to control a range of electronic toys?</p> <p>Can I show awareness of everyday devices that sense data e.g. bar codes, metal detectors, sound recorders, light sensors, automatic doors, thermometers?</p> <p>Can I program a simple floor robot (Bee-Bot / Roamer) to</p>	<p>Can I move a programmable toy in different directions, by giving and following instructions?</p> <p>Can I combine commands to follow a route?</p> <p>Can I explore outcomes when instructions are given in different orders?</p> <p>Can I explain what an algorithm is?</p> <p>Can I describe and write algorithms to complete specific tasks?</p>	<p>Can I plan out and enter a sequence of commands to carry out specific tasks?</p> <p>Can I reorder a sequence of instructions and correct errors in programs (debug)?</p> <p>Can I explain what a program is?</p> <p>Can I predict the outcome of a program?</p> <p>Can I explore a computer simulation that copies real life?</p>	<p>Can I understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions?</p>



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	<p>carry out a short sequence of steps?</p> <p>Can I respond to simple cause and effect devices (push a button to hear a sound)?</p> <p>Can I play with a simple adventure program or simulation / role play software, and begin to compare reality with virtual world?</p> <p>Can I respond appropriately to what happens in simulations and begin to notice that different responses result in different outcomes?</p>			
Data	<p>Can I begin to develop simple classification skills by carrying out simple sorting activities away from the computer?</p> <p>Can I continue to develop simple classification skills by carrying out simple sorting activities using ICT?</p> <p>Can I produce simple pictograms with help?</p>	<p>Can I sort items into sets or simple tables?</p> <p>Can I draw a simple graph, e.g. pictogram / block graph?</p> <p>Can I explain what the graph shows?</p>	<p>Can I read and use a simple database to find information?</p> <p>Can I add information to a database?</p> <p>Can I collect and record data purposefully?</p> <p>Can I present data in a bar chart?</p> <p>Can I answer and ask questions about bar charts?</p>	<p>Can I create and debug simple programs?</p> <p>Can I use logical reasoning to predict the behaviour of simple programs?</p> <p>Can I use technology purposefully to create, organise, store, manipulate and retrieve digital content?</p>
Communication	<p>Can I develop mouse control?</p> <p>Can I use a paint program to make marks, using simple</p>	<p>Can I switch on and log into a computer?</p> <p>Can I use a mouse to click and drag?</p>	<p>Can I identify examples of computers?</p> <p>Can I develop mouse control?</p>	<p>Can I use technology purposefully to create, organise, store, manipulate and retrieve digital content?</p> <p>Can I recognise common</p>



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	<p>tools, to communicate their ideas?</p> <p>Can I use different forms of electronic communication in free play?</p> <p>Can I begin to use a keyboard to produce text on screen, and develop familiarity with letters, numbers, backspace, arrow keys and space bar?</p>	<p>Can I use a paint program to make marks, using simple tools, to communicate my ideas?</p> <p>Can I use different forms of electronic communication in free play?</p> <p>Can I begin to use a keyboard to produce text on screen, and develop familiarity with letters, numbers, backspace, arrow keys and space bar?</p>	<p>Can I edit and improve my work by changing, adding or removing words?</p> <p>Can I change the font size, colour and style to change my work?</p>	<p>uses of information technology beyond school?</p>
<p>Digital literacy and research</p> <p>Online safety</p>	<p>Can I use a shortcut to navigate to a specific website?</p> <p>Can I use appropriate buttons, menus and hyperlinks to navigate a teacher selected website, CD-ROM or stored information?</p> <p>Can I, with support, use appropriate websites or CD ROMs to locate small amounts of information / images?</p>	<p>Can I explore a website using buttons, menus and hyperlinks?</p> <p>Can I use the 'back' button?</p> <p>Can I read words, look at pictures and watch videos on a website to find information?</p> <p>E-safety: Can I understand that I need to follow rules to keep safe online?</p>	<p>Can I find out facts by navigating websites?</p> <p>Can I understand that each website has a unique address?</p> <p>Can I navigate to a website via favourites and typing in address?</p> <p>Can I understand that not all the information found on the internet will be accurate or useful?</p> <p>Can I use a search engine to find facts using key word searches?</p> <p>E-safety Can I understand that the messages or images I put online leaves a trail?</p>	<p>Can I use technology safely and respectfully, keeping personal information private?</p> <p>Can I identify where to go for help and support when I have concerns about content or contact on the internet or other online technologies?</p>



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			<p>Can I understand how to behave safely and respectfully online?</p> <p>Can I understand what to do if I find something inappropriate online, & where to go for help?</p> <p>Can I understand how to stay safe by going to appropriate websites?</p>	
Multimedia	<p>Can I use multimedia equipment, e.g. digital cameras, video cameras, webcams and visualisers, to capture still and moving images?</p> <p>Can I explore ways of making and listening to sounds using simple programs and devices?</p>	<p>Can I paint with different colours using undo or eraser to correct mistakes?</p> <p>Can I use different tools such as brush, pen, line, shape and fill?</p> <p>Photography:</p> <p>Can I use a digital still camera to take a picture?</p> <p>Can I understand the need to frame the image and keep the camera still?</p> <p>Audio:</p> <p>Can I record an audio recording?</p> <p>Can I play back an audio recording?</p>	<p>Can I discuss the quality of my images and make decisions e.g. delete a blurred image?</p> <p>Can I use a photograph within a document?</p> <p>Can I combine a set of photographs to tell a story?</p> <p>Video:</p> <p>Can I capture video?</p> <p>Can I understand the need to frame the image and move the camera carefully?</p> <p>Can I play back a video recording?</p>	To use technology purposefully to create, organise, store, manipulate and retrieve digital content