

Computing – Progression of skills and knowledge

	Nursery	Reception	Year 1	Year 2
Information Technology	<ul style="list-style-type: none"> ● Can use a mouse and keyboard with developing control. ● Can use technology appropriately through role play. ● Can access and use simple activities using touch technology with increasing control. 	<ul style="list-style-type: none"> ● Can recognise a range of technology that they use at both home and school – laptops, iPads etc. ● Can select and use technology for a purpose. ● Can name the different parts of a computer, ● Can use a mouse and keyboard with developing control ● Can access and use simple activities using touch technology with increasing control. 	<ul style="list-style-type: none"> ● Can use a mouse, finger etc. to select & move items on the screen, assembling or matching objects. ● Can take a digital picture or video clip, or record a sound, as part of a task. ● Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) ● Can make straight-forward edits of their digital work (text, image, sound etc..) using simple editing tools, to correct or improve it. ● Can access a resource and then find answers to straight-forward questions. ● Can recognise and talk about some common uses of computing in the world around them. ● Can save and retrieve some work (and print if appropriate to task). 	<ul style="list-style-type: none"> ● Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) ● Can make straight-forward edits of their digital work (text, image, sound etc..) using simple editing tools, to correct or improve it. ● Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information. ● Can create and amend a (multi-media) resource for a clear purpose, starting to show a sense of the 'audience'. ● Can create & store some data, (simple data file), and then find answers to straight-forward questions. ● Can recognise and talk about some common uses of computing in the world around them. ● Can save and retrieve work (and print if appropriate to task).
	Year 3	Year 4	Year 5	Year 6
Information Technology.	<ul style="list-style-type: none"> ● Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) ● Can make straight-forward edits of their digital work (text, image, sound etc..) using simple editing tools, to both correct and improve it ● Can create and amend a (multi-media) resource that shows a sense of 'audience'. ● Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information. ● Can create & store some data, (simple data file), and then find answers to straight-forward questions. ● Can recognise and talk about some common uses of ICT in the world around them. ● Can save and retrieve work from electronic folders (and print if appropriate to task). 	<ul style="list-style-type: none"> ● Can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc..) for meaningful purpose(s). ● Can also edit and amend their digital work (text, image, sound etc..) using simple editing tools, to both correct and improve it. ● Can create and amend a multi-media resource that shows a sense of 'audience'. ● Can navigate their way within range of (selected) online content, to find specific information. ● Can include some information / content from an online resource within a 'presentation'. ● Can use a data file to find answers to straight-forward questions, (such as through data logging or a survey or a prepared database or a simple spreadsheet, etc). ● Can save and retrieve work from electronic folders (and print if appropriate to task). 	<ul style="list-style-type: none"> ● Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. ● Can combine resources from different sources into a digital presentation, showing clear sense of intended purpose and 'audience'. ● Can find specific and valid information (i.e. be discerning) using sensible key words / search terms, from (selected) online web content, as fits the task. ● Can (collect), analyse and draw conclusions from data, (such as through data logging or a survey or a prepared database or through manipulating a spreadsheet, etc). ● Can save and retrieve work from various electronic folders on network (and controlled online environments where relevant). 	<ul style="list-style-type: none"> ● Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. ● Can combine resources from different sources into a digital presentation, evaluate it, and show clearly intended purpose and 'audience' ● Can be discerning and find valid information using sensible key words / search terms, from a range of online web content, as fits the task. ● Can (collect), analyse, evaluate and draw conclusions from data, such as through survey, database or spreadsheet, etc. ● Can save and retrieve work from various electronic folders on network (and controlled online environments where relevant).

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Computer Science	<ul style="list-style-type: none"> ● Can use control toys i.e. bee-bots and make them move forwards and backwards. 	<ul style="list-style-type: none"> ● Can use a range of control toys and devices. ● Can be given simple instructions to follow i.e. move the bee-bot forward 5 spaces back 2 and complete these tasks. 	<ul style="list-style-type: none"> ● Can give simple instructions to control a device, like a 'floor' robot, or on-screen object. ● Can use trial and error to produce an accurate set of simple instructions, to control a floor 'robot' or on-screen object. ● Can name some digital devices that need precise instructions (algorithms) to work / be controlled. ● Understands that software may represent a fantasy situation and can make sensible (logical) decisions/choices when 'playing' a straight-forward 'game'. ● Understands some basic computing terms and concepts, such as ... algorithm, program, sequence, etc. 	<ul style="list-style-type: none"> ● Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object. ● Can use trial and error to produce an accurate set of 'instructions' to control a floor 'robot' or on-screen object; refine (de-bug) and improve / make changes. ● Can talk about some electronic devices and understands that they need precise instructions (algorithms) to work / be programmed (controlled). ● Demonstrates logical 'trial and error' when using a computer simulation or game, and predicts the consequences of decisions/choices made. ● Understands some basic computing terms and concepts, such as: (school) network, algorithm, program, debug, editing, website, etc.
	Year 3	Year 4	Year 5	Year 6
Computer Science.	<ul style="list-style-type: none"> ● Demonstrates logical 'trial and error' when using a computer simulation, 'model' or game, and predicts some consequences of decisions/choices made. ● Can produce an accurate set of simple instructions (code), to program (control) an on-screen object (or floor 'robot'), using trial and error to debug. ● Can also talk about how the sequence of events in some simple instructions (algorithms) or code are 'working'. ● Can talk about some digital devices beyond school, that need precise instructions (algorithms) to work / be programmed (controlled). ● Knows some relevant computing terms such as computer network, Internet, algorithm, program, World Wide Web, website, etc. 	<ul style="list-style-type: none"> ● Demonstrates logical choices and prediction when using a computer simulation, 'model' or game and can make simple edits to solve a problem. ● Can produce, debug and edit an accurate sequence of instructions, include use of repeat, to control on-screen objects. ● Can plan and create a program using decomposition; includes the use of selection (IF/ELSE) and/or variables. ● Can talk about different types of input options e.g. motion /touch, microphone, data logging sensor; and output options e.g. switch, speakers, screen, etc. ● Developing and using a wider computing 'vocabulary' relevant to work, such as de-bug, Apps, data logging, search engine, spam, Wiki, etc. 	<ul style="list-style-type: none"> ● Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. ● Can create an accurate program to accomplish a given goal, including the use of repetition (loops), selection (IF/ELSE) and variables. ● Can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. ● Can use different types of input options and output options such as through sensing and control 'kits' and/or software, to solve a problem. ● Has an understanding of computer networks (local, internet services and WWW). ● Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, variable, validate, digital footprint, spam, Wiki, etc. 	<ul style="list-style-type: none"> ● Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. ● Can create & develop programs, by planning, debugging and applying programming skills of repetition (loops), selection (IF/ELSE) and variables, to accomplish specific goals. ● Can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. ● Can use different types of input options and output options such as through sensing and control 'kits' and/or software to solve a problem. ● Has an understanding of computer networks (local, internet services and WWW). ● Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, HTML, https, variable, validate, digital footprint, etc.

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Digital Literacy	<ul style="list-style-type: none"> • Speaks to an adult about what they have seen online. • Talks about what they are doing on a computer and how i.e. I am typing – could be during role play etc. 	<ul style="list-style-type: none"> • Knows about the Internet and beginning to understand some key, age appropriate, safety 'rules'. • Knows what to do/how to act if they find/see something on the internet that makes them feel uncomfortable. 	<ul style="list-style-type: none"> • Knows about the Internet and beginning to understand some key, age appropriate, safety 'rules'. • Can share some information with others, (such as via school network, a 'closed' blog). • Can find some straight-forward information from a 'safe', selected online resource. 	<ul style="list-style-type: none"> • Can talk about key online safety 'rules' and knows where to go / report if a problem. • Can create and share some information online, (such as a 'closed' email system or blog), understanding need to be respectful and safe. • Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'.
	Year 3	Year 4	Year 5	Year 6
Digital Literacy	<ul style="list-style-type: none"> • Can talk about key online safety 'rules' and knows where to go / report if a problem. • Can create and share some information online (such as in school MLE, email/blog), understanding need to be respectful and safe. • Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'. 	<ul style="list-style-type: none"> • Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem. • Can create and share some information online (such as school MLE, email / blog), demonstrating need to be respectful and safe. • Can find straight-forward information from (selected) website resource(s) and knows sites can contain, true or false facts, or opinion. 	<ul style="list-style-type: none"> • Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem. • Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues. • Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. • Understands some simple steps to 'validate' information found on the Web, and appreciates how search results are selected and ranked. 	<ul style="list-style-type: none"> • Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues. • Can discuss range of eSafety and eSecurity (privacy) issues and knows range of ways to report concerns or inappropriate behaviour. • Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. • Can check the results of web searches i.e. how useful, relevant, reasonable, valid, accurate, and appreciates how search results are selected & ranked.

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