

## Computing - Progression of Skills and Knowledge

Year	Information Technology	Computer Science	Digital Literacy
<b>Y1</b>	<ul style="list-style-type: none"> <li>Can use a mouse, finger etc. to select &amp; move items on the screen, assembling or matching objects.</li> <li>Can take a digital picture or video clip, or record a sound, as part of a task.</li> <li>Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.)</li> <li>Can make straight-forward edits of their digital work (text, image, sound etc.) using simple editing tools, to both correct or improve it.</li> <li>Can access a resource and then find answers to straight-forward questions.</li> <li>Can recognise and talk about some common uses of IT in the world around them.</li> <li>Can save and retrieve some work (and print if appropriate to task).</li> </ul>	<ul style="list-style-type: none"> <li>Can give simple instructions to control a device, like a 'floor' robot, or on-screen object.</li> <li>Can use trial and error to produce an accurate set of simple instructions, to control a floor 'robot' or on-screen object.</li> <li>Can name some digital devices that need precise instructions (algorithms) to work / be controlled.</li> <li>Understands that software may represent a fantasy situation and can make sensible (logical) decisions/choices when 'playing' a straight-forward 'game'.</li> <li>Understands some basic computing terms and concepts, such as ... algorithm, program, sequence, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Knows about the Internet and beginning to understand some key, age appropriate, safety 'rules'.</li> <li>Can share some information with others, (such as via school network, in school MLE, via a 'closed' blog).</li> <li>Can find some straight-forward information from a 'safe', selected online resource.</li> </ul>
<b>Y2</b>	<ul style="list-style-type: none"> <li>Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.)</li> <li>Can make straight-forward edits of their digital work (text, image, sound etc.) using simple editing tools, to both correct or improve it.</li> <li>Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information.</li> <li>Can create and amend a (multi-media) resource for a clear purpose, starting to show a sense of the 'audience'.</li> <li>Can create &amp; store some data, (simple data file), and then find answers to straight-forward questions.</li> <li>Can recognise and talk about some common uses of IT in the world around them.</li> <li>Can save and retrieve work (and print if appropriate to task).</li> </ul>	<ul style="list-style-type: none"> <li>Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object.</li> <li>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.</li> <li>Can talk about some electronic devices and understands that they need precise instructions (algorithms) to work / be programmed (controlled).</li> <li>Demonstrates logical 'trial and error' when using a computer simulation or game, and predicts the consequences of decisions/choices made.</li> <li>Understands some basic computing terms and concepts, such as: (school) network, algorithm, program, debug, editing, website, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Can talk about key online safety 'rules' and knows where to go / report if a problem.</li> <li>Can create and share some information online, (such as in school MLE, 'closed' email system or blog), understanding need to be respectful and safe.</li> <li>Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'.</li> </ul>

*With thanks to Tom Armstrong, formerly of Brackenbury Primary School for starting work on this.*

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<b>Y3</b>	<ul style="list-style-type: none"> <li>Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.)</li> <li>Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.</li> <li>Can create and amend a (multi-media) resource that shows a sense of 'audience'.</li> <li>Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information.</li> <li>Can create &amp; store some data, (simple data file), and then find answers to straight-forward questions.</li> <li>Can recognise and talk about some common uses of ICT in the world around them.</li> <li>Can save and retrieve work from electronic folders (and print if appropriate to task).</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates logical 'trial and error' when using a computer simulation, 'model' or game, and predicts some consequences of decisions/choices made.</li> <li>Can produce an accurate set of simple instructions (code), to program (control) an on-screen object (or floor 'robot'), using trial and error to refine (de-bug).</li> <li>Can also talk about how the sequence of events in some simple instructions (algorithms) or code are 'working'.</li> <li>Can talk about some digital devices beyond school, that need precise instructions (algorithms) to work / be programmed (controlled).</li> <li>Knows some relevant computing terms such as computer network, Internet, algorithm, program, World Wide Web, website, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Can talk about key online safety 'rules' and knows where to go / report if a problem.</li> <li>Can create and share some information online (such as in school MLE, email/blog), understanding need to be respectful and safe.</li> <li>Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'.</li> </ul>
<b>Y4</b>	<ul style="list-style-type: none"> <li>Can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s).</li> <li>Can also edit and amend their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.</li> <li>Can create and amend a multi-media resource that shows a sense of 'audience'.</li> <li>Can navigate their way within range of (selected) online content, to find specific information.</li> <li>Can include some information / content from an online resource within a 'presentation'.</li> <li>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).</li> <li>Can save and retrieve work from electronic folders (and print if appropriate to task).</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates logical choices and prediction when using a computer simulation, 'model' or game and can make simple edits to solve a problem.</li> <li>Can produce, debug and edit an accurate sequence of instructions, include use of repeat, to control on-screen objects.</li> <li>Can plan and create a program using decomposition; includes the use of selection (IF/ELSE) and/or variables.</li> <li>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.</li> <li>Developing and using a wider computing 'vocabulary' relevant to work, such as de-bug, Apps, data logging, search engine, spam, Wiki, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem.</li> <li>Can create and share some information online (such as school MLE, email / blog), demonstrating need to be respectful and safe.</li> <li>Can find straight-forward information from (selected) website resource(s) and knows sites can contain, true or false facts, or opinion.</li> </ul>

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Year	Information Technology	Computer Science	Digital Literacy
<b>Y5</b>	<ul style="list-style-type: none"> <li>Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects.</li> <li>Can combine resources from different sources into a digital presentation, showing clear sense of intended purpose and 'audience'.</li> <li>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.</li> <li>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).</li> <li>Can save and retrieve work from various electronic folders on network (and controlled online environments where relevant).</li> </ul>	<ul style="list-style-type: none"> <li>Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem.</li> <li>Can create an accurate program to accomplish a given goal, including the use of repetition (loops), selection (IF/ELSE) and variables.</li> <li>Can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient.</li> <li>Can use different types of input options and output options such as through sensing and control 'kits' and/or software, to solve a problem.</li> <li>Has an understanding of computer networks (local, internet services and WWW).</li> <li>Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, variable, validate, digital footprint, spam, Wiki, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem.</li> <li>Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues.</li> <li>Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours.</li> <li>Understands some simple steps to 'validate' information found on the Web, and appreciates how search results are selected and ranked.</li> </ul>
<b>Y6</b>	<ul style="list-style-type: none"> <li>Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects.</li> <li>Can combine resources from different sources into a digital presentation, evaluate it, and show clearly intended purpose and 'audience'</li> <li>Can be discerning and find valid information using sensible key words / search terms, from a range of online web content, as fits the task.</li> <li>Can (collect), analyse, evaluate and draw conclusions from data, such as through survey, database or spreadsheet, etc.</li> <li>Can save and retrieve work from various electronic folders on network (and controlled online environments where relevant).</li> </ul>	<ul style="list-style-type: none"> <li>Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem.</li> <li>Can create &amp; develop programs, by planning, debugging and applying programming skills of repetition (loops), selection (IF/ELSE) and variables, to accomplish specific goals.</li> <li>Can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient.</li> <li>Can use different types of input options and output options such as through sensing and control 'kits' and/or software to solve a problem.</li> <li>Has an understanding of computer networks (local, internet services and WWW).</li> <li>Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, HTML, https, variable, validate, digital footprint, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues.</li> <li>Can discuss range of eSafety and eSecurity (privacy) issues and knows range of ways to report concerns or inappropriate behaviour.</li> <li>Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours.</li> <li>Can check the results of web searches i.e. how useful, relevant, reasonable, valid, accurate, and appreciates how search results are selected &amp; ranked.</li> </ul>

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