



## Skills Progression for Computing

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Information Technology</b>  <b>Focus on:</b> Text, animation, music graphics data handling  <b>KS1</b> Use technology purposefully to create, organise, store, <b>manipulate</b> and <b>retrieve</b> digital content.  <b>KS2</b> Use <b>search technologies</b> effectively. Select, use and combine a variety of <b>software</b> (including <b>internet services</b> ) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including <b>collecting, analysing, evaluating</b> and <b>presenting data</b> and <b>information</b> .	<p>Can use a mouse, finger etc. to select &amp; move items on the screen, assembling or matching objects. (use correct terminology and key vocabulary of identifying parts of the computer)</p> <p>Can take a digital picture or video clip, or record a sound, as part of a task. (JIT, Painting &amp; drawing software, Busy things)</p> <p>Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) (JIT, Painting &amp; drawing software, Busy things)</p> <p>Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to correct or improve it. (JIT, Painting &amp; drawing software, Busy things)</p> <p>Can access a resource and then find answers to straight-forward questions. (appropriate websites on computers/tablets and apps on ipads)</p> <p>Can recognise and talk about some common uses of IT in the world around them. (unplugged)</p> <p>Can save and retrieve some work (and print if appropriate to task). (review the icon/symbol for 'save' on apps or programs used)</p>	<p>Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) (j2branch, word processing software, publisher, JIT, j2webby)</p> <p>Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to correct or improve it. (appropriate websites on computers/tablets and apps on ipads)</p> <p>Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information.(appropriate websites on computers/tablets and apps on ipads)</p> <p>Can create and amend a (multi-media) resource for a clear purpose, starting to show a sense of the 'audience'. j2branch, word processing software, publisher, JIT, j2webby)</p> <p>Can create &amp; store some data, (simple data file), and then find answers to straight-forward questions. (2investigate, J2 data, JIT, J2vote)</p> <p>Can recognise and talk about some common uses of IT in the world around them.(unplugged)</p> <p>Can save and retrieve work (and print if appropriate to task).(review the icon/symbol for 'save' on apps or programs used)</p>	<p>Can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s). (Windows Moviemaker, animation software options, 2paint, paint)</p> <p>Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.(Windows Moviemaker, animation software options, 2paint, paint)</p> <p>Can create and amend a (multi-media) resource that shows a sense of 'audience'. (Windows Moviemaker, animation software options, 2paint, paint, j2e5, j2webby)</p> <p>Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information. (appropriate websites on computers/tablets and apps on ipads)</p> <p>Can create &amp; store some data, (simple data file), and then find answers to straight-forward questions. (appropriate websites on computers/tablets and apps on ipads)</p> <p>Can recognise and talk about some common uses of ICT in the world around them. (unplugged)</p> <p>Can save and retrieve work from electronic folders (and print if appropriate to task). (computer Login and program access)</p>	<p>Can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s). (Windows Moviemaker, animation software options, 2paint, paint)</p> <p>Can also edit and amend their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it. (Windows Moviemaker, animation software options, 2paint, paint)</p> <p>Can create and amend a multi-media resource that shows a sense of 'audience'. (Windows Moviemaker, animation software options, presentation software, 2paint, paint)</p> <p>Can navigate their way within range of (selected) online content, to find specific information.(appropriate websites on computers/tablets and apps on ipads)</p> <p>Can include some information / content from an online resource within a 'presentation'. (appropriate websites on computers/tablets and apps on ipads)</p> <p>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). (j2 vote, j2data Ms excel, j2investigate)</p> <p>Can save and retrieve work from electronic folders (and print if appropriate to task). (computer Login and program access)</p>	<p>Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. (j2e5, j2webby)</p> <p>Can combine resources from different sources into a digital presentation, showing clear sense of intended purpose and 'audience'. (animation software options, presentation software)</p> <p>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. (appropriate websites on computers/tablets and apps on ipads)</p> <p>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). MS excel</p> <p>Can save and retrieve work from various electronic folders on network (and controlled online environments where relevant). (computer Login and program access)</p>	<p>Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects (animation software options, j2e5, j2webby)</p> <p>Can combine resources from different sources into a digital presentation, evaluate it, and show clearly intended purpose and 'audience' (animation software options, presentation software, j2e5, j2webby)</p> <p>Can be discerning and find valid information using sensible key words / search terms, from a range of online web content, as fits the task. (appropriate websites on computers/tablets and apps on ipads)</p> <p>Can (collect), analyse, evaluate and draw conclusions from data, such as through survey, database or spreadsheet, etc. MS excel</p> <p>Can save and retrieve work from various electronic folders on network (and controlled online environments where relevant). (computer Login and program access)</p>

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<b>Computer Science</b> Focus: <b>Programming</b>  <b>KS1</b> Understand what <b>algorithms</b> are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and <b>debug</b> simple programs. Use logical reasoning to <b>predict</b> the behaviour of simple programs.  <b>KS2</b> Design, write and debug programs that accomplish specific goals, including <b>controlling</b> or <b>simulating</b> physical systems; solve problems by <b>decomposing</b> them into smaller parts. Use <b>sequence</b> , <b>selection</b> , and <b>repetition</b> in programs; work with <b>variables</b> and various forms of input and output. Use logical reasoning to explain how some simple <b>algorithms</b> work and detect and correct errors in algorithms and programs. Understand <b>computer networks</b> including the <b>internet</b> ; how they can provide multiple services, such as the World Wide Web.	<p>Can give simple instructions to control a device, like a 'floor' robot, or on-screen object. (floor robots, iboard, JIT, Tynker)</p> <p>Can use trial and error to produce an accurate set of simple instructions, to control a floor 'robot' or on-screen object. (floor robots, iboard, JIT, Tynker)</p> <p>Can name some digital devices that need precise instructions (algorithms) to work / be controlled. (unplugged, iboard, busy things, JIT)</p> <p>Understands that software may represent a fantasy situation and can make sensible (logical) decisions/choices when 'playing' a straight-forward 'game'. (unplugged, iboard, busy things, JIT)</p> <p>Understands some basic computing terms and concepts, such as ... algorithm, program, sequence, etc. (unplugged, iboard, busy things, JIT)</p>	<p>Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object. (unplugged, floor robot, JIT, Busy Things)</p> <p>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. (unplugged, floor robot, JIT, Busy Things)</p> <p>Can talk about some electronic devices and understands that they need precise instructions (algorithms) to work / be programmed (controlled). (unplugged, floor robot, JIT, Busy Things)</p> <p>Demonstrates logical 'trial and error' when using a computer simulation or game, and predicts the consequences of decisions/choices made. (unplugged, floor robot, JIT, Busy Things)</p> <p>Understands some basic computing terms and concepts, such as: (school) network, algorithm, program, debug, editing, website, etc. (unplugged, floor robot, JIT, Busy Things)</p>	<p>Demonstrates logical 'trial and error' when using a computer simulation, 'model' or game, and predicts some consequences of decisions/choices made. (J2code, Kodu, floor robots)</p> <p>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. (J2code, Kodu, floor robots)</p> <p>Can also talk about how the sequence of events in some simple instructions (algorithms) or code are 'working'. (J2code, Kodu, floor robots)</p> <p>Can talk about some digital devices beyond school, that need precise instructions (algorithms) to work / be programmed (controlled). (appropriate terminology, unplugged, everyday devices)</p> <p>Knows some relevant computing terms such as computer network, Internet, algorithm, program, World Wide Web, website, etc. (appropriate terminology, unplugged, everyday devices)</p>	<p>Demonstrates logical choices and prediction when using a computer simulation, 'model' or game and can make simple edits to solve a problem. (j2 code, scratch, Kodu, Barefoot resources)</p> <p>Can produce, debug and edit an accurate sequence of instructions, include use of repeat, to control on-screen objects. (j2 code, scratch, Kodu, Barefoot resources)</p> <p>Can plan and create a program using decomposition; includes the use of selection (IF/ELSE) and/or variables. (j2 code, scratch, Kodu, Barefoot resources)</p> <p>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. (appropriate terminology, unplugged, everyday devices)</p> <p>Developing and using a wider computing 'vocabulary' relevant to work, such as de-bug, Apps, data logging, search engine, spam, Wiki, etc. (appropriate terminology, unplugged, everyday devices)</p>	<p>Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. (Scratch, mBot robots, Makeblock software, Codebug hardware &amp; software, BBC bitesize, Barefoot computing)</p> <p>Can create an accurate program to accomplish a given goal, including the use of repetition (loops), selection (IF/ELSE) and variables. (j2 code, scratch, barefoot computing)</p> <p>Can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. (Scratch, mBot robots, Makeblock software, Codebug hardware &amp; software, BBC bitesize, Barefoot computing)</p> <p>Can use different types of input options and output options such as through sensing and control 'kits' and/or software to solve a problem. (cookIT)</p> <p>Has an understanding of computer networks (local, internet services and WWW). (search engines)</p> <p>Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, variable, validate, digital footprint, spam, Wiki,</p>	<p>Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. (Scratch, mBot robots, Makeblock software, Codebug hardware &amp; software, BBC bitesize, Barefoot computing)</p> <p>Can create &amp; develop programs, by planning, debugging and applying programming skills of repetition (loops), selection (IF/ELSE) and variables, to accomplish specific goals. (j2 code, scratch, barefoot computing)</p> <p>Can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. (Scratch, mBot robots, Makeblock software, Codebug hardware &amp; software, BBC bitesize, Barefoot computing)</p> <p>Can use different types of input options and output options such as through sensing and control 'kits' and/or software to solve a problem. (j2code, scratch)</p> <p>Has an understanding of computer networks (local, internet services and WWW). (search engines)</p> <p>Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, HTML, https, variable, validate, digital footprint, etc.</p>

<p>Appreciate how [search] results are selected and ranked.</p>					<p>etc.(terminology, BBC bitesize, barefoot computing)</p>	<p>(terminology, BBC bitesize, barefoot computing)</p>
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<p><b>Digital Literacy</b></p> <p>Focus: <b>Online safety, sharing information</b></p> <p><b>KS1</b></p> <p>Recognise common uses of information technology beyond school.</p> <p>Use technology safely and respectfully, keeping <b>personal information</b> private; identify where to go for help and support when they have concerns about <b>content</b> or <b>contact</b> on the internet or other online technologies.</p> <p><b>KS2</b></p> <p>Understand the opportunities [networks] offer for <b>communication</b> and <b>collaboration</b>.</p> <p>Be concerning in evaluating digital content.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Knows about the Internet and beginning to understand some key, age appropriate safety 'rules'. (Childnet resource, BBC bitesize)</p> <p>Can share some information with others, (such as via school network, in school MLE, via a 'closed' blog).(JIT J2webby)</p> <p>Can find some straight-forward information from a 'safe', selected online resource. (Childnet resource, BBC bitesize)</p>	<p>Can talk about key online safety 'rules' and knows where to go / report if a problem. (unplugged, internet scenario cards, PSHE powerpoints, 3BM SoW)</p> <p>Can create and share some information online, (such as in school MLE, 'closed' email system or blog), understanding need to be respectful and safe. (child friendly search engines, JIT or 2publish, presentation software)</p> <p>Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'. (any child friendly search engines)</p>	<p>Can talk about key online safety 'rules' and knows where to go / report if a problem. (unplugged, internet scenario cards, PSHE powerpoints, 3BM SoW, BBC video)</p> <p>Can create and share some information online (such as in school MLE, email/blog), understanding need to be respectful and safe. (LGfL cyberpass, j2e5, bbc bitesize)</p> <p>Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'. (any child friendly search engines)</p>	<p>Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem. (unplugged, internet scenario cards, PSHE powerpoints, 3BM SoW, BBC video)</p> <p>Can create and share some information online (such as school MLE, email / blog), demonstrating need to be respectful and safe. (LGfL cyberpass, j2e5, j2webby)</p> <p>Can find straight-forward information from (selected) website resource(s) and knows sites can contain, true or false facts, or opinion. (j2e5, j2webby, pupil email, unplugged, internet scenario cards)</p>	<p>Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem. (cybersafe, various identified websites, internet scenario cards)</p> <p>Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues. (j2e5, presentation software, thinkuknow, kidsmart)</p> <p>Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. (j2e5, presentation software, thinkuknow, kidsmart)</p> <p>Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. (j2e5, presentation software)</p> <p>Understands some simple steps to 'validate' information found on the Web, and appreciates how search results are selected and ranked. (unplugged)</p>	<p>Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues. (j2e5, presentation software, thinkuknow, kidsmart)</p> <p>Can discuss range of eSafety and eSecurity (privacy) issues and knows range of ways to report concerns or inappropriate behaviour. (j2e5, presentation software, thinkuknow, kidsmart)</p> <p>Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. j2e5, presentation software)</p> <p>Can check the results of web searches i.e. how useful, relevant, reasonable, valid, accurate, and appreciates how search results are selected &amp; ranked. (various identified websites)</p>