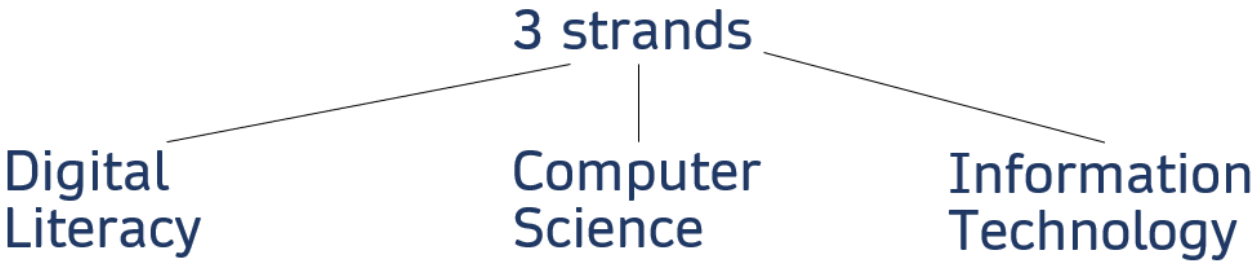
# Computing




| Digital Literacy | Computer Science | Information Technology |
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| **How to sum it up - how devices can be used effectively, safely and responsibly** | **How to sum it up - how computers work** | **How to sum it up - how computers are used purposefully** |
| **Key aspects:**<br>- how to use the device (computer, iPad, programmable toy)<br>- searching and selecting information<br>- online safety | **Key aspects:**<br>- computation, algorithms and programming, data (input, process, output), systems<br>-Knowledge of programming is hierarchical and sequential. Begin with a secure base.<br>-Give children practical programming experience that begins with tinkering – in EYFS and at the start of a new unit/program.<br>-Our pupils have told us they find coding hard, so they need time to learn by exploring first. | **Key aspects:**<br>- The creation of digital artefacts (anything created on a device) – presentations, videos, animations, spreadsheets<br>- Understanding computing contexts – how computing is used in various ways; how and what technology underpins those uses<br>- Understanding computer networks and systems, including the world wide web |

# Summer Medium Term Plan Hollinswood Primary School and Nursery
# Computing – Information Technology

| | Substantive knowledge – the stuff of Computing | Disciplinary knowledge – how Computing is studied | Vocabulary | Big Question |
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| **EYFS –** | **I know:**<br><br>what a mouse/mousepad is and<br><br>what it does<br><br>I know what a keyboard does<br><br>I know my work can be on screen (digital) or printed | **I know:**<br><br>when I click/touch a button/screen that something happens<br><br>**I know how to:**<br><br>use my fine motor skills to click the mouse<br><br>use my fine motor skills to use the mousepad<br><br>use my fine motor skills to use the touch screen on the iPad/laptop screen<br><br>press a button on a robot to make it work<br><br>click and drag on a computer game<br><br>click, drag and drop in a computer game<br><br>use my mouse/mousepad skills to do a simple drawing<br><br>use the iPad to take a photo or video<br><br>use a computer program to make music | button<br>screen<br>iPad<br>mouse<br>mousepad laptop<br>computer<br>monitor<br>keyboard<br>cable<br>website<br>program<br>click<br>remote control<br>wireless<br>digital<br>printed<br><br>pen tool<br>fill/bucket tool<br>undo<br>record<br>play<br>repeat, melody | How can I draw and play a game using the mouse pad?<br><br>**Resources/staff subject knowledge:**<br><br>**Tinkering activities (Open Door)**<br>Beep Beep, Mini Mash (Purple Mash)<br>Sphero<br><br>Purple Mash 2Paint, 2Explore, 2Do It Yourself, Simple City<br>Computer Discovery - Early Years - iLearn2 \| Primary Computing. Made Easy.<br>EYFS - Digital Photos and Videos - iLearn2 \| Primary Computing. Made Easy.<br>EYFS - Digital Art and Design - iLearn2 \| Primary Computing. Made Easy.<br>EYFS/Year 1 Music Creation - iLearn2 \| Primary Computing. Made Easy.<br>Barefoot Units – Colour collections, Journeys, Seaside Tangrams: Summer resources I. T |

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| **Year 1** | **I know:**<br><br>that art can be created digitally<br><br>that comic strips can be created digitally<br><br>what animation is<br><br>I know my work can be on screen (digital) or printed | **I know:**<br><br>the difference between text and images<br><br>what a comic is<br><br>what the home row is<br><br>where to put my fingers to type the home row keys<br><br>**I know how to:**<br><br>use my fine motor skills to click the mouse<br>use my fine motor skills to use the mousepad<br><br>log on with some support<br><br>click, drag and drop in a computer game<br><br>use my mouse/mousepad skills to do a simple drawing<br>create a digital art picture<br>add colour, images and text to a page<br><br>use a word bank<br><br>edit and improve my work<br><br>change the colour of text<br><br>add a background for a comic strip<br>add characters into my comic strip<br><br>resize my characters<br><br>add a character to my animation<br><br>make my character move by making small changes<br>Add sound to my animation<br><br>copy frames to create an animation<br>type the home row keys correctly<br><br>use a computer program to make music | text<br>image<br>resize<br>page<br>background<br>colour<br>plus<br>minus<br>character, speech bubble<br>insert<br>undo<br>print<br>word bank, capital letter, full stop, undo print<br><br>animate, animation<br>movement<br>story<br>character<br>background<br>draw<br>colour<br>tools<br>copy, paste, change, edit, move<br><br>typing<br>keyboard<br>home row<br>keys<br>space bar<br>volume<br>log on<br>password<br>log on name<br>links<br>website<br>repeat, play, record, repeat, melody, instrument, volume, high, low, beats | How can I make art, animation and music on a computer?<br><br>**Resources/staff subject knowledge:**<br>Year 1 Text & Images - iLearn2 \| Primary Computing. Made Easy.<br>EYFS/Year 1 Mouse and Keyboard - iLearn2 \| Primary Computing. Made Easy.<br><br>edclub (typingclub.com)<br><br>Purple Mash – 2Animate, 2Explore, 2Beat, 2Paint, 2Paint a Picture<br><br>Year 1/3 Comic Creation - iLearn2 \| Primary Computing. Made Easy.<br><br>Computing systems and networks – Technology around us (teachcomputing.org)<br><br>Creating media – Digital painting (teachcomputing.org) |

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| **Year 2** | **I know:**<br><br>that art can be created digitally<br><br>that music can be created digitally<br><br>what a tally chart is<br><br>what a pictogram is<br><br>what a survey is<br><br>what animation is<br><br>computers store and follow instructions<br><br>what data is<br><br>that technology is used at school and at home | **I know:**<br><br>where the home row is on the keyboard<br><br>that typing is more efficient if you use the correct fingers on the keys<br><br>**I know how to:**<br><br>create a digital art picture<br><br>log into Purple Mash<br><br>save my work in Purple Mash (or another program)<br><br>open and improve my work in Purple Mash (or another program)<br><br>create a graph or pictogram in 2Graph (or another program)<br><br>create a survey in 2Survey (or another program)<br><br>create a postcard in 2Publish<br><br>place my fingers on the home row keys<br><br>type the home row keys with correct fingers<br><br>create a digital animation<br><br>add a background to my animation<br><br>add a character to my animation<br><br>make my character move by making small changes<br><br>use the onion skin tool in animation<br><br>add sound to my animation<br><br>copy frames to create an animation<br><br>spot common uses of IT in and out of school | digital artefact<br>image, resize, page background<br>colour<br>plus, minus<br>shade<br>undo<br>save<br>print<br>file name<br>portrait<br>erase<br>light<br>dark<br><br>data<br>data handling<br>information<br>question<br>present<br>pictogram<br>answer<br>tally chart, tally, amount total, axis, bar graph, title, bar chart, pie chart<br><br>survey<br>questions<br>input, data, information, answers, questionnaire, right, wrong, correct, incorrect, select, text box, save<br><br>typing, keyboard, home row keys, space bar, shift keys, caps lock, full stop, text box,<br><br>animate, animation, movement, story, character, background, draw, colour, tools, copy, paste, change, edit, move | Can I make art, animations and other digital artefacts?<br><br>**Resources/staff subject knowledge:**<br>Purple Mash – 2Create a Picture, 2Graph, 2Survey, 2Animate, 2Publish<br><br>https://www.ilearn2.co.uk/year-2-data-handling.html<br>edclub (typingclub.com)<br>https://www.ilearn2.co.uk/year-2-animation.html<br>ABCya Animate • ABCya!<br>https://www.ilearn2.co.uk/year-2-digital-art.html<br>http://code-it.co.uk/dlplanning/presentationmedia/presentationmedia2<br>https://www.ilearn2.co.uk/year-2-animation.html<br>Year 2 Uses of IT - iLearn2 \| Primary Computing. Made Easy.<br>Computing systems and networks – IT around us (teachcomputing.org) |

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| **Year 3** | **I know:**<br><br>what an ebook is<br><br>what word processing is<br><br>word is used for word processing<br><br>PowerPoint is used for presenting information<br><br>what a digital artefact is | **I know:**<br><br>where the home row is<br><br>what animations are<br><br>**I know how to:**<br><br>use Book Creator to create an ebook<br><br>touch type the home row keys with the correct fingers<br><br>use Word to create digital content<br><br>use Powerpoint to create digital content<br><br>insert a text/image box<br>open a file<br><br>save a file<br><br>edit a file<br><br>print my work<br>save to OneDrive<br><br>open work in OneDrive<br><br>delete using backspace<br><br>use the shift key for capital letters<br><br>edit the size, colour and font of text<br>create an animation | digital artefacts ebook, digital text, text box, picture, insert, copy, paste, title, text tools, font, size, undo, edit, improve, frame, slide<br><br>touch typing, home row, space bar, backspace<br><br>program, Word, screenshot, cut, copy, paste, image, picture, copyright, plagiarism<br><br>Microsoft, text box, clip art, resize, save, slide, page, font, size, cut and paste, document, print, PowerPoint, slide, animation, save, edit, improve, desktop publishing,<br><br>Computing system, network, connect, digital device, input, output, process, WiFi | Can I create digital artefacts on different programs?<br><br>**Influential Tech Leader:**<br>Tim Berners-Lee – inventor of World Wide Web and HTML<br>Tim Berners-Lee Facts for Kids (kiddle.co)<br>Tim Berners-Lee Facts & Worksheets \| Life, Career, Internet & Impact (kidskonnect.com)<br><br>**Resources/staff subject knowledge:**<br><br>Book Creator – iPads/laptops<br>edclub (typingclub.com)<br>Microsoft Word<br>Microsoft PowerPoint<br>Purple Mash applications<br><br>Word Processing Skills and Understanding – code-it supported by HIAS, Hampshire Inspection and Advisory Service<br>General ICT Skills – code-it supported by HIAS, Hampshire Inspection and Advisory Service<br>Computing systems and networks – Connecting computers (teachcomputing.org)<br>Creating media – Desktop publishing (teachcomputing.org)<br>Preview - Year 3 Document Creation - iLearn2 \| Primary Computing. Made Easy.<br>Year 3 Digital Storyboards - iLearn2 \| Primary Computing. Made Easy.<br>Computing systems and networks – Connecting computers (teachcomputing.org)<br>Creating media - Stop-frame animation (teachcomputing.org) |

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| **Year 4** | **I know:**<br><br>when to use Word, Publisher and Powerpoint<br><br>I need to highlight text before editing it<br><br>what a hyperlink is<br><br>what an icon is<br><br>what an animation is<br><br>what a digital artefact is<br><br>what inputs and outputs are<br><br>some information I find online may not be accurate<br><br>how information is shared across the internet | **I know:**<br><br>what slide transitions are<br><br>**I know how to:**<br><br>highlight and edit text<br><br>use the copy and paste function<br><br>resize a text box<br><br>use bold, italics and underline functions<br><br>touch type the home row keys with the correct fingers<br><br>use Word to create digital content<br><br>use Powerpoint to create digital content<br><br>save a file<br><br>edit a file<br>print my work<br><br>save to OneDrive<br><br>open work in OneDrive<br><br>add images to Microsoft applications<br><br>create an ebook<br><br>add a hyperlink to an ebook or file<br><br>create a stop-motion video by duplicating slides<br><br>create an animation using transition<br><br>animate individual elements of objects<br><br>explain what the internet is | digital artefact, font, size, undo, edit, highlight, bold, italics, underline,<br><br>icon, shape tool, arrange, fill, graphic design<br><br>touch typing, home row, space bar, backspace<br><br>program, Microsoft Word, screenshot, cut, copy, paste, copyright, plagiarism<br><br>Microsoft Publisher, , text box, clip art, resize, save, page, font, size, document, print, Microsoft PowerPoint, slide, transition, animation, save, edit, improve<br>Animation, stop motion, transition, screenshot, duplicate<br><br>World wide web, internet, network, digital device, input, output, information | Am I a Microsoft master?<br><br>**Influential Tech Leader:**<br>Steve Jobs – Co-founder of Apple<br>Steve Jobs Facts for Kids (kiddle.co)<br>Steve Jobs - Wikipedia<br><br>**Resources/staff subject knowledge:**<br><br>Microsoft Word<br>Microsoft Publisher<br>Microsoft PowerPoint<br>edclub (typingclub.com)<br>Book Creator – iPads/laptops<br>Purple Mash applications<br><br>Year 4 Graphic Design - iLearn2 \| Primary Computing. Made Easy.<br>Year 4 Ebook Creation - iLearn2 \| Primary Computing. Made Easy.<br>Year 4 Animation - iLearn2 \| Primary Computing. Made Easy.<br>Computing systems and networks – The Internet (teachcomputing.org)<br>Creating media – Desktop publishing (teachcomputing.org)<br>Creating media - Stop-frame animation (teachcomputing.org) |

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| **Year 5** | **I know:**<br><br>what a digital artefact is<br><br>what the internet and world wide web are<br><br>what a computer network is<br><br>what an operating system is<br><br>how online search results are selected and ranked<br><br>what an app is | **I know how to:**<br><br>save a file<br><br>edit a file<br><br>print my work<br><br>save to OneDrive<br><br>open work in OneDrive<br><br>add images to Microsoft applications<br><br>explain what a computer network is<br><br>explain the difference between the internet and the world wide web<br><br>use different operating system skills<br><br>use a search engine effectively<br><br>collect and present data using different software<br><br>analyse and evaluate data<br><br>use PowerPoint to design an app | Digital artefact, network, internet, world wide web, program, system, data, media, digital device, cloud computing, Bluetooth, collaborate, operating system,<br><br>Collect, analyse, evaluate, present, data, formula, total, maximum, minimum, cells, Excel<br><br>System, input, process, output, search engine, ranking, world wide web, webpage, content creator, digital content<br><br>Database, data, group, ranking, search, organise, information, sorting, filtering, formulae, sum, average, charting<br><br>PowerPoint, slide, transition, edit, crop, rotate, borders, logo, icon, navigation | **Influential Tech Leader:**<br>Elon Musk – Co-founder of PayPal, chairman of Tesla<br>Elon Musk - Students \| Britannica Kids \| Homework Help<br>Tim Berners-Lee – inventor of World Wide Web and HTML<br>Tim Berners-Lee Facts for Kids (kiddle.co)<br>Tim Berners-Lee Facts & Worksheets \| Life, Career, Internet & Impact (kidskonnect.com)<br><br>**Resources/staff subject knowledge:**<br><br>Microsoft Excel<br>Microsoft PowerPoint<br>Year 5 Computer Networks - iLearn2 \| Primary Computing. Made Easy.<br>Computing systems and networks - Systems and searching (teachcomputing.org)<br>Data and information – Flat-file databases (teachcomputing.org)<br>Year 5 Data Handling - iLearn2 \| Primary Computing. Made Easy.<br>Year 5 App Design - iLearn2 \| Primary Computing. Made Easy. |

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| **Year 6** | **I know:**<br><br>what the internet and world wide web are<br><br>what a computer network is<br><br>what an operating system is<br><br>how online search results are selected and ranked<br><br>data is transferred across the internet<br><br>people can work online publicly or privately<br><br>what conditional formatting is<br><br>what filters are<br><br>how technology has changed over time<br><br>what machine learning and AI are<br><br>that there are potential dangers to AI<br><br>websites are written in HTML<br><br>the common features of a webpage<br><br>what copyright means<br><br>what a navigation path is<br><br>I should think before I link! | **I know how to:**<br><br>share information using the internet<br><br>choose which method of communication to use<br><br>search a spreadsheet using filters<br><br>search a spreadsheet using conditional formatting<br><br>use software to show how technology has changed over time<br><br>use examples of AI tools to understand how it works<br><br>review a website<br><br>recognise the common features of a webpage<br><br>find copyright-free images<br><br>add content, preview and evaluate my own webpage<br><br>explain what a navigation path is<br><br>make multiple web pages and link them using hyperlinks<br><br>explain the implication of linking to content owned by others<br><br>create hyperlinks to link to other people's work | Internet, world wide web, communication, collaboration, data, public, private, sharing<br><br>Data, Excel, spreadsheet, filters, formatting<br><br>AI, machine learning, instructions, dangers, implications, consequences, positives, negatives, benefits, problems<br><br>Webpage, breadcrumb line, navigation, hyperlink, copyright, copyright-free, layout, image | **Influential Tech Leaders:**<br>Female role models who changed the tech world (inc. Ava Lovelace)<br>The Women Who Changed The Tech World (globalapptesting.com)<br>**Video**<br>Richard Turere: My invention that made peace with lions \| TED Talk<br><br>**Resources/staff subject knowledge:**<br>Microsoft Excel<br>Microsoft Word<br>Microsoft PowerPoint<br>GoogleSites<br>Computing systems and networks - Communication and collaboration (teachcomputing.org)<br>Year 6 Data Detectives - iLearn2 \| Primary Computing. Made Easy.<br>Year 6 Computers: Past, Present, Future - iLearn2 \| Primary Computing. Made Easy.<br>Year 6 Machine Learning and AI - iLearn2 \| Primary Computing. Made Easy.<br>Creating media – Web page creation (teachcomputing.org) |