Computing

3 strands

Digital Literacy   Computer Science   Information Technology

Digital Literacy	Computer Science	Information Technology
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: - how to use the device (computer, iPad, programmable toy) - searching and selecting information - online safety	**Key aspects:** - computation, algorithms and programming, data (input, process, output), systems -Knowledge of programming is hierarchical and sequential. Begin with a secure base. -Give children practical programming experience that begins with tinkering – in EYFS and at the start of a new unit/program. -Our pupils have told us they find coding hard, so they need time to learn by exploring first.	**Key aspects:** - The creation of digital artefacts (anything created on a device) – presentations, videos, animations, spreadsheets - Understanding computing contexts – how computing is used in various ways; how and what technology underpins those uses - 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
EYFS – **Concepts:** Software skills Creating IT knowledge Digital responsibility	**I know:** what a mouse/mousepad is and what it does what a keyboard does my work can be on screen (digital) or printed	**I know:** when I click/touch a button/screen that something happens **I know how to:** use my fine motor skills to click the mouse use my fine motor skills to use the mousepad use my fine motor skills to use the touch screen on the iPad/laptop screen create a digital picture press a button on a robot to make it work click and drag on a computer game click, drag and drop in a computer game use my mouse/mousepad skills to do a simple drawing use the iPad to take a photo or video use a computer program to make music	button screen iPad mouse mousepad laptop computer monitor keyboard cable website program click remote control wireless digital printed pen tool fill/bucket tool undo record play repeat, melody	How can I draw and play a game using the mouse pad? **Resources/staff subject knowledge:** **Tinkering activities (Open Door)** Beep Beep, Mini Mash (Purple Mash) Sphero Purple Mash 2Paint, 2Explore, 2Do It Yourself, Simple City Computer Discovery - Early Years - iLearn2 | Primary Computing. Made Easy. EYFS - Digital Photos and Videos - iLearn2 | Primary Computing. Made Easy. EYFS - Digital Art and Design - iLearn2 | Primary Computing. Made Easy. EYFS/Year 1 Music Creation - iLearn2 | Primary Computing. Made Easy. Barefoot Units – Colour collections, Journeys, Seaside Tangrams: Summer resources I. T

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

		type the home row keys correctly		
		use a computer program to make music		

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

| | | | spot common uses of IT in and out of school | draw, colour, tools, copy, paste, change, edit, move | |

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

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

		create an animation using transition		
		animate individual elements of objects		
		explain what the internet is		

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

		rotate, borders, logo, icon, navigation	

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

	what copyright means		
	what a navigation path is		
	I should think before I link!		