



St Nicholas CE Primary School
Key Stage 2 Skills Progression Map

Subject: Computing

Bold Text: National Curriculum (statutory and non-statutory)

To be Taught	Year 3	Year 4	Year 5	Year 6
COMPUTER SCIENCE				
Program	<ul style="list-style-type: none"> - Write programs that accomplish a simple purpose (e.g. a PowerPoint animation, Purplemash 2Code) - Start breaking problems into smaller parts e.g. the background and sprite in Scratch. 	<ul style="list-style-type: none"> - start to design programs for a specific goal i.e. planning before writing - use selection (if...then) and repetition (repeat...until) commands e.g. in a quiz 	<ul style="list-style-type: none"> - Design and write programs for a given purpose in more abstract contexts e.g. Excel formulas. - Start using a range of inputs e.g. sensors, music) to inform selection commands. 	<ul style="list-style-type: none"> - Solve problems they identify themselves, designing and writing programs to address this. - Work confidently with sequence, selection and repetition; work with variables and various forms of input and output.
Debug	<ul style="list-style-type: none"> - Debug a simple program independently, and start to identify bugs in their own work. 	<ul style="list-style-type: none"> - identify and fix bugs in their own programming e.g. for a goal that's specified to them 	<ul style="list-style-type: none"> - Independently alter a program e.g. to make it more efficient. 	<ul style="list-style-type: none"> - Alter and improve their own and others' programs explaining why, and predicting and/or describing the effect.
Use logic	<ul style="list-style-type: none"> - Explain how some simple algorithms work. 	<ul style="list-style-type: none"> - Explain what logical reasoning means. 	<ul style="list-style-type: none"> - Use precise language to explain how to debug a program. 	<ul style="list-style-type: none"> - n/a
DIGITAL LITERACY				
Working with digital content				
Create, manipulate and present:	<ul style="list-style-type: none"> - Follow instructions to create content in a range of editing programs. - Deliver a short presentation with digital content e.g. recount a football tournament with photos on IWB. - Copy and paste e.g. from website text into Word document. - Manipulate more digital content e.g. resize images, alter the font, take a screengrab. 	<ul style="list-style-type: none"> - Select between software (e.g. Publisher vs Word) and explain their reasons. - Deliver a short presentation with purpose-made digital backdrop e.g. a photo gallery on PowerPoint. - Use a range of selection, annotation and other tools e.g. measuring distance in a digimap. - Take a screengrab and insert it into another program. 	<ul style="list-style-type: none"> - Select and use a range of editing software, and move simple content purposefully between programs. - Create a presentation with text/images to support them in showcasing work. 	<ul style="list-style-type: none"> - Carefully select and move content within and between applications e.g. top and tailed video embedded into a slideshow. - Use a range of supporting material to showcase their work and take questions.



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Organise / store:	<ul style="list-style-type: none"> - Save files appropriately without support. 	<ul style="list-style-type: none"> - Create and (re)name folders to collect digital content. 	<ul style="list-style-type: none"> - Create and (re)name folders, moving files as appropriate. 	<ul style="list-style-type: none"> - Manipulate folders by creating, renaming and even deleting (with supervision).
Retrieve:	<ul style="list-style-type: none"> - Perform a keyword search e.g. within Word or on a search engine. 	<ul style="list-style-type: none"> - Search and find files on a computer. - Use a search engine and make decisions about which site to visit. 	<ul style="list-style-type: none"> - Find 'lost' files on a computer, identifying and recording the directory details. - Use a search engine and explain the rationale/purpose behind which site they choose to visit. 	<ul style="list-style-type: none"> - Find files, identify the director details and move/resave elsewhere is appropriate. - Use search technologies effectively, explaining how the algorithms select and rank results.
Analyse / evaluate:	<ul style="list-style-type: none"> - Start to select and order information according to relevance 	<ul style="list-style-type: none"> - Select and sort by relevance, start to analyse reliability and explain their reasons. 	<ul style="list-style-type: none"> - Select and sort by relevance and reliability, and explain their reasoning. 	<ul style="list-style-type: none"> - Thoughtfully and politely critique their peers' rationale for selection / sorting.
Using IT safely				
	<ul style="list-style-type: none"> - Start to locate online safety procedures e.g. the report-abuse button, screengrabs to desktop. - Able to list some forms of personal data (e.g. home address, date of birth). 	<ul style="list-style-type: none"> - Understand and use a range of online safety procedures e.g. saving a screengrab so it can be retrieved. - Review privacy settings to protect personal data. 	<ul style="list-style-type: none"> - Screengrab an online message and forward it by email. - Verbalise what is meant by personal data, and explain how we might reveal it inadvertently. 	<ul style="list-style-type: none"> - Constantly show awareness of e-safety e.g. checking settings as a priority within a new app. - Automatically review their messages, texts, posts etc. to check for personal data.
Communications technology (network):	<ul style="list-style-type: none"> - Understand how emails are delivered (intranet of a school). - Write a short post on a safe site. 	<ul style="list-style-type: none"> - Understand computer networks e.g. the world wide web. - Write posts and respond respectfully on. 	<ul style="list-style-type: none"> - Look at the world wide web and how it provides multiple services - Write, reply-to and forward short emails. 	<ul style="list-style-type: none"> - Understanding the use of remote collaboration and communication with an understanding of sensitive issues. - Use CC and BCC and be sensitive about personal data in the previous message field.
Using IT respectfully				
	<ul style="list-style-type: none"> - Verbalise the possible consequences of their online behavior. - Be polite when challenging others' values and opinions. 	<ul style="list-style-type: none"> - Use their knowledge of consequences to manage and adapt their own behaviour. - Show awareness of cultural and religious context, adjusting their style of challenge accordingly. 	<ul style="list-style-type: none"> - Challenge others' values and opinions sensitively (and where appropriate) begin to cope with/compensate for others lack of respect. 	<ul style="list-style-type: none"> - Sensitively cope with and compensate for other people's lack of respect. - Show awareness of, and explain, privacy, copyright and plagiarism.



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	- Show respect for online content, e.g. distinguishing between public and private material.	- Show respect for online content e.g. by acknowledging a source.	- Show respect for online content e.g. by investigating permissions.	
PRACTICAL SKILLS				
Keyboard	- Increased speed with a QWERTY keyboard, e.g. can type several sentences in a lesson without struggling.	- Use more than one finger to type letters, and both thumbs for the spacebar.	- Start to position hands correctly, moving fingers rather than arms to type.	- Type at 2 letters per second, using different fingers and minimizing arm wrist movement.
Mouse:	- Highlight, drag, right-click and double-click.	- Use a mouse to manipulate text, images and controls.	- Confident use of a mouse.	- Confident use of a mouse.
VOCABULARY				
For Programming	<ul style="list-style-type: none"> - digitize - algorithm - sequence - series 	<ul style="list-style-type: none"> - programming language - purpose - value - perpendicular 	<ul style="list-style-type: none"> - repetition - selection - simulation - pattern - logical reasoning 	<ul style="list-style-type: none"> - cause - characteristic - phase - transition - angle
For hardware, systems, etc.	<ul style="list-style-type: none"> - motor - input - output - digital resources - text - post - social media - community - meme - email - blog - vlog - forum 	<ul style="list-style-type: none"> - font - URL - word processing - voice recognition - kilobyte - megabyte - tab - control panel - icon - file extension - personal data 	<ul style="list-style-type: none"> - sensor - physical - system - browser - gigabyte - back up - Jpeg - pixel 	<ul style="list-style-type: none"> - resolution - quality - Mpeg - wav - pdf - USB - video conference
			<ul style="list-style-type: none"> - gateway - hub - router - server - driver - cookies - file directory - send - reply - CC / BCC - reply-all - recipient 	<ul style="list-style-type: none"> - field permissions - cache - flash drive - memory stick / pen - HTML - open source - Wikis - solid state - fibre-optic - identity theft
For controls	<ul style="list-style-type: none"> - 'control alt' - cursor 	<ul style="list-style-type: none"> - crop - rotate 	<ul style="list-style-type: none"> - control pane - animation pane 	<ul style="list-style-type: none"> - pop up - publish
			<ul style="list-style-type: none"> - internet / browser history 	<ul style="list-style-type: none"> - bookmarks - password



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	<ul style="list-style-type: none">- short cut- drag- drop- cut- copy- paste	<ul style="list-style-type: none">- flip- top-and-tail- screengrab- minimize- maximise	<ul style="list-style-type: none">- share	<ul style="list-style-type: none">strength				
For talk about IT	<ul style="list-style-type: none">- relevance- retrieve- content- numerical	<ul style="list-style-type: none">- clarify- opinion- communication	<ul style="list-style-type: none">- inappropriate- contribution- manipulate	<ul style="list-style-type: none">- reliability- consequence	<ul style="list-style-type: none">- impact- obstacle- crucial- rigorous- verify	<ul style="list-style-type: none">- context- paraphrase- quote- verbatim	<ul style="list-style-type: none">- controversy- prejudice- authentic- plausible	<ul style="list-style-type: none">- analyse- discern- copyright- plagiarism