Computing – Progression of Skills

	Online Safety and Digital Literacy see [Education for a Connected World](#)	**Information Technology**	**Computer Science**
KS1	• Know that the internet is accessed all over the World and know which devices are connected to the internet. • Know that they should always ask a responsible adult if they want to use a device.	• Know how to log onto a computer • Know how to navigate around the screen with a mouse • Know how to type text using space bar for separate words to create something meaningful • Know how to independently find and open an app on a tablet	• Know which button on a device represents which action e.g. Bee Bot • Know how to program a robot to follow simple sequence of instructions (1- 2 turns) • Know how to make simple predications about an algorithm and a program. The Bee Bow will go…. • Know how to change (debug) the program to improve the route
	Vocabulary 3D, *program, *debug, design, emoji, *search, website, personal information, link, menu, trusted adult, online, sign in, game, log in, digital, communicate, algorithm		
	• Know devices that enable direct communication between people through images and text. • Know what personal information is and that they should never share this with anyone they don't know. • Know that they should tell a trusted adult if they are upset or worried about anything on a device.	• Know how to save, retrieve and print work • Know how to type and format text including basic punctuation and capital letters • Know how to confidently use pointing device • Know how to add simple images • Know how to combine simple text and graphics, for instance create a poster for a purpose.	• Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) • Begin to use block programming e.g. Scratch Junior (Alex, Daisy Dino) to complete a simple program. • Know how to debug more complex problems e.g. a route on a Bee Bot / Blue Bot / Alex / Logo etc… maze.
	Vocabulary browser, *computer network, *data, execute/run, *input, *output, *software, *World Wide Web (WWW), password, username, interact, images, facts, scan, chat, post, re-post, repeat, loop, characters, *avatar, evaluate, publish, trust, reputation, template, algorithm		

	Online Safety and Digital Literacy see [Education for a Connected World](#)	**Information Technology**	**Computer Science**
Y3/Y4	• Know that some people are the internet should not be trusted • Know that concerns about what they see on-line should be reported to a trusted adult • Use a simple password • Use a Search engine to find information given key words • Know which websites are useful • Know how to log in and out of websites used at school	• Know how to log in to computer system as themselves and can find their documents (personal drive) • Know how to open shared documents and pictures. • Know how to use software to create a simple brochure or poster. Publisher or Pages • Know how to sequence and add to slides to make a simple presentation Keynote, Powerpoint, iMovie • Create a meaningful document that contains both pictures and text	• Know how to use a block program (Scratch Jun, Scratch, Microbit Blocks)) to make a simple programme using sequencing and timing. • Inputs sets of instructions according to programming language and environment (Logo, Scratch Jnr, Microbit etc..) • Use a program Logo or Scratch to draw regular 2D shapes • Independently know how to debug basic mistakes • Begin to use conditionals – If I click here then this happens... Scratch Junior, Scratch, Microbit
	Vocabulary block, palette, code / coding, command, *decomposition, sprite, stage, control block, costume, *digital content, *simulation, hyperlink, attachment, URL, blog blogging, consequences, illustrator, untrusted, cyberbully, reliable, *megabyte, *gigabyte, verify, soundtrack, VR virtual reality, font, shortcut, multimedia, authenticate		
	• Know that pictures and text share on-line can end up with strangers • Reliably know what to do if they are exposed to unpleasant materials on any device • Reliably uses a more complex password to access resources. • Know what the key words are to enter into a Search engine to find information they want. • Can select useful websites from the results of a search.	• Know how to save a document in a shared folder and retrieve this to continue working on it. Computer. On an iPad work could be shared by Airdrop or equivalent. • Know how to organise their personal folder effectively for instance by organising work into folders for each year at school • Know how to change font size and style; include shapes and backgrounds and to use the Spellcheck function • Know how to use sequence to create an effective presentation or video Keynote, Powerpoint or iMovie. • Know how to deliver a simple presentation to their peers	• Know how to use a program to sequence, use conditionals and use a variety of inputs and outputs (Logo/Scratch). • Know how to explain how their program works • Know how to modify their program and Know how to predict the effects of any changes • Know how to break sets of instructions into short steps to achieve goal. For instance drawing repeated squares to make a pattern,
	Vocabulary *logical reasoning, audio, *selection, *page ranking, hacker, *repetition, script, scripts area, loop, *netiquette, *conditional, scene, filters, storyboard, digital footprint, animation, age restriction, screenshot, spellcheck		

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Y5/ Y6	• Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Know that it is irresponsible to share images of friends on-line without their permission. • Know how to report concerns on-line. • Effectively use a search engine to find multiple criteria using AND/OR to refine searches • Know how to compare information from different websites and know that some sites may show bias	• Know how to share their work from their personal folder to work collaboratively with others. • Know how to use software to create and effective poster or leaflet. • Know how to select the best program for the task. • Using software know how to add data into a prepared spreadsheet to answer simple questions. For instance using Excel • Independently, prepare an effective presentation to show their learning to others which includes some elements of timing or sequence. For instance in Keynote, Powerpoint, iMovie	• Use customisation to change a working program to change its effect backgrounds and sprite in scratch) • Uses loops to achieve goals (Scratch – shapes, letters) • Uses variables, conditional sentences (when/then), external triggers and loops to achieve set goals (creating game in Scratch, an interactive slides in Powerpoint or Keynote for instance to create an interactive story)

Vocabulary

You-tuber, vlog, IP address, pixels, vector, HTML, ISP, *variables, *peripheral, *CEOP, *cache, harassment, plagiarism, copyright, download, upload, streaming, blocking, victim, *cookie, junk email, USB, zip, data, spreadsheet

	• Know how to reduce the risks posed by using Social Media by managing their friends lists and privacy settings. • Know that it is illegal to post or view 'rude' images of children. • Know that hacking or misusing someone else's account is illegal. • Know that search results can be manipulated by sponsorship and advertising. • Know how to validate information found through searches by checking more than one source. • Know that some news is 'fake.'	• Know how to use the main features of office software to produce suitable documents and presentations for an audience. Microsoft Office or Apple suite or equivalent. • Know how to edit a picture. For instance in Paint.net • Know how to create a simple formula in a spreadsheet to work out given mathematical tasks such as adding a set of numbers. • to create and sequence a video, add sound effects, transitions and title/subtitles. iMovie – much harder in Windows software. • Know how to use two or more programmes to create a final piece of work. (eg, edit a picture before inserting into a document).	• Use conditional sentences (when/then) to program objects (Kodu, Scratch) • As above but use mathematical expressions when constructing conditionals eg trigger winning when (If loops >5 then…) • Know how to explain what a program might do and accurately predict the effect of changes

Vocabulary

anti-virus, *abstraction, collaboration, *visual coding, text based coding, *adware, feedback, server, *firewall, *conditional, security update, plug in, pop up blocker, scams, *phishing, trolling, sexting, exclusion, flaming, ghosting, filtering, malware, screen time, configuring, formula, fake news, sceptical