

## **Computing: Progression of Skills and Knowledge**



Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Digital	Literacy: Intern	et Safety and Oper	rational Core Skills		
Self-image and Identity	l know that being on- screen is different to real life.	If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust.	I can describe ways in which people might make themselves look different online.	l can describe ways in which media can shape ideas about gender.	I can explain how my online identity can be different to the identity I present in 'real life'.	l can explain how identity online can be copied, modified or altered.	l can explain how l can represent myself in different ways online.
Online relationships	l recognise that people can talk to each other using technologies.	l can recognise some ways in which the <b>internet</b> can be used to communicate.	I can explain some risks of communicating <b>online</b> with others I don't know well.	I can explain how my and other people's feelings can be hurt by what is said or written online.	I can explain what it means to 'know someone' online and why this might be different from knowing someone in real life.	I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming).	I can demonstrate how I would support others (including those who are having difficulties) online.
Online reputation	I can talk about different types of information on the internet, e.g. pictures / text / video.	I can describe what information I should not put <b>online</b> without asking a trusted adult first.	I can explain how information put online about me can last for a long time.	I know who I should ask if I am not sure if I should put something online.	I can describe how others can find out information about me by looking online.	I can describe ways that information about people online can be used by others to make judgments about an individual.	l can describe some simple ways that help build a positive online reputation.

Online bullying		I can describe how to behave online in ways that do not upset others		I can describe rules about how to behave online and how I follow them.	I can explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them (their reputation).	I can explain how I would report online bullying on the apps and platforms that I use.	I can identify a range of ways to report concerns both in school and at home about online bullying.
Managing online information	I can use, talk about or read different on- screen programs, pictures, stories or information.	I can identify devices I could use to access information on the internet.	I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).	I can evaluate digital content and can explain how I make choices from search results.	I can <b>analyse</b> information and differentiate between 'opinions', 'beliefs' and 'facts'.	I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.	I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.
Health, well- being and lifestyle	I can talk about the difference between activities that are online or offline.	I can explain rules to keep us safe when we are using technology both in and beyond the home.	I can create <b>rules</b> for using technology <b>safely</b>	I can identify situations when I might need to limit the amount of time I use technology.	I can describe ways technology can affect healthy sleep and can describe some of the issues.	I can describe common systems that regulate age- related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.	I can assess and action different strategies to limit the impact of technology on my health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise).
Privacy and security	l can talk about trusting people (e.g. parents, teachers).	l can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).	I can explain why I should always ask a trusted adult before I share any information about myself online.	I can describe simple strategies for creating and keeping passwords private.	l can explain how internet use can be monitored.	I can explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others.	l can compare and evaluate different methods of online communication

Copyright and ownership	l know that work I create belongs to me.	l can name my work so that others know it belongs to me.	I can recognise that content on the internet may belong to other people.	I can explain why copying someone else's work from the internet without permission can cause problems.	When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.	I can demonstrate the use of search tools to find and access online content which can be reused by others.	I can recognise the implications of linking to (and using) content owned by other people
Operational Core Skills	I can use hand-eye coordination to operate devices such as touch- screens	I can use <b>apps</b> or <b>websites</b> to aid my learning I can <b>save and</b> <b>retrieve</b> work that I have produced (includes <b>auto-</b> <b>save</b> ) I can move a <b>cursor</b> with the trackpad and <b>click</b> on an icon	I can <b>type</b> and <b>edit</b> basic text I can use <b>two-</b> <b>finger scrolling</b> on a touchpad I can use the <b>shift</b> <b>key</b> to create capital letters	I know how to <b>search</b> for items on the internet I can <b>type</b> confidently and independently I can type <b>basic</b> <b>punctuation</b> correctly within on-screen writing (spaces, commas, full stops, question marks) I can perform a <b>two-</b> <b>finger click or right-</b> <b>click</b> to access additional options	I can <b>type</b> to achieve specific goals, including accurate punctuation I can check and correct my spellings digitally I can successfully use multiple <b>apps</b> or <b>web</b> <b>browser tabs</b> at the same time	I can edit and improve on-screen writing, including digital thesaurus use I can combine a variety of software (programs that run on computers) to accomplish given goals	I can <b>re-order</b> on- screen sentences for clarity, purpose and effect I can <b>type at speed</b> with accurate spelling and correct use of punctuation conventions
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	Inj	formation Techr	nology: Knowled	lge & Understandi	ng and Multimedi	a & Sound	
Knowledge & Understanding	I can talk about technology, using pictures and memory	I can identify examples of <b>technology</b> in the classroom I can place <b>items</b>	I can identify the major parts of <b>digital devices</b> (e.g. keyboard, screen, power, batteries, touchscreen)	I can identify <b>networked devices</b> around me (e.g. networked printer, wireless laptop)	I can recognise that the <b>world wide web</b> is part of the internet I understand that the global interconnection	I can explain that a search engine uses web crawlers to create an index I can explain that a	I can collect data and enter it into a <b>spreadsheet</b> I can recognise that data can be calculated
	recall I can explore apps on a touchscreen, large	into groups (e.g. these shapes are all red) I can decide on <b>labels</b> for groups (e.g. these shapes all have four sides)	I can <b>identify</b> information technology in the school, home, and beyond I can <b>enter data</b> into	I can identify <b>inputs</b> and <b>outputs</b> of common computing devices (e.g inputs: keys on a keyboard, temperature sensor, tilting a device; outputs: screen display, printer)	of networks is the <b>internet</b> I can use a digital device to <b>collect data</b> automatically	search engine follows <b>rules</b> to <b>rank</b> results I understand that <b>emails</b> and other digital	using different operations I can apply a formula to calculate the data I need to answer questions

	screen or laptop device.		I can use a computer to <b>present data</b> I can find answers to questions by looking at <b>data</b>	I can use technology to organise and manipulate <b>digital</b> <b>content</b> I can create questions with yes / no answers to categorise objects I can retrieve information from different levels of a branching database	I can choose how often to collect <b>data samples</b>	from various types of digital device I can choose multiple criteria to <b>search</b> <b>data</b> to answer a given question ( <b>AND</b> <b>and OR</b> ) I can choose which <b>attribute</b> to sort data by to answer a given question I can choose an appropriate graph to	I understand that computer systems transfer information over networks in data packets I understand that connections between computers allow us to work together
Multimedia and Sound	l can experience and talk about pictures, video and sound that are viewed through digital devices	l can use an <b>app</b> or <b>website</b> to make graphical marks or pictures	I can use <b>technology</b> to capture (e.g. with an iPad) and manipulate (position, re-size, rotate) photos I can create and adjust audio using digital technology	I can design and create an <b>animation</b> (e.g. stop-frame animation on an iPad) I can recognise that different <b>font styles</b> and <b>effects</b> are used for particular purposes	I can plan for a podcast or music production I can <b>record</b> and <b>edit</b> sound using digital technology as part of a podcast or music production I can edit images for purpose I can manipulate and adjust images for a particular purpose	visually compare data I can edit video, bringing together different media elements (e.g. stills, video, captions and sound) to produce an effective final product I can create a vector drawing that is comprised of lines and shapes of different colours I can resize, duplicate, rotate and align objects in vector drawings I can use grouping and layers in my vector drawing	I can recognise the common features of a web page I can devise my own web design which contains navigation paths (menus, hyperlinks etc.) I can recognise the difference when working with <b>3D</b> <b>objects</b> in comparison to 2D shapes I can produce a <b>3D</b> <b>model</b> and decide how it can be improved (e.g. using Tinkercad)

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		Computer S	cience: Progra	mming, including	Controlling Hardwo	are	·
Programming, including Controlling Hardware		Espresso Coding: Block level 1 - 'On the move' I can understand and create algorithms (role play and on paper). Block level 1 - 'Simple inputs' I understand that computer programs run by following precise instructions. Micro:bit Project:	Espresso Coding: Block level 2 – 'Buttons & Instructions' I can predict the behaviour of simple programs. I can create and run a program. Block level 2 – 'Different sorts of inputs' I can debug (find and fix a problem) within a simple program. Micro:bit Project:	Espresso Coding: Block level 3 – 'Conditional events' I can identify that sprites can be controlled by commands that I choose. I can debug errors across a sequence of code. Block level 3 – 'Sequence and animation' I can create a sequence of connected commands. Micro:bit Project:	Espresso Coding: Block level 4 – 'Introduction to variables' I can create variables within my programs. I can identify the inputs of common computing devices. I can identify the outputs of common computer devices. Block level 4 – 'Repetition and loops' I can use repetition in my programs. I can decompose a programming problem into smaller parts. Micro:bit Project:	Espresso Coding: Block level 5 – 'Random numbers and simulation' I can write code that performs calculations with variables (e.g. every time a coin is collected, add one point to the score). I can create code that acts on multiple inputs. Block level 5 – 'Speed, direction and coordinates' I can program and debug multiple functions on programmable hardware. I can decompose (break into smaller chunks) a programming problem.	Espresso Coding: Block level 6 – 'More complex variables' I can identify examples of information that is variable. I can use variables of my own creation within my programs. Block level 6 – 'Object properties' I can use a random function in my code for purposeful effect. Micro:bit Project: I can program and debug multiple functions on programmable hardware.