Computing Progression of Skills and Knowledge

Information Technology

		Reception	Year 1	Year 2
Word Processing/Typing		• Children recognise that a range of technology is used in places such as homes and schools. • They select and use technology for particular purposes.	**NC Ref: Pupils should be taught to:** Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	**NC Ref: Pupils should be taught to:** Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
		• Play on a touch screen game and use computers/keyboards/mouse in role play • Type letters with increasing confidence using a keyboard and tablet • Dictate short, clear sentences into a digital device	• Confidently type words quickly and correctly on a digital device • Use the space bar to make space and delete to delete letters/words • Make a new line using enter/return • Dictate into a digital device more accurately and with punctuation	• Use the space bar only once between words and use touch to • navigate to words letter to edit • Copy and paste images and text • Use caps locks for capital letters • Add images alongside text in a word-processed document • Dictate longer passages into a digital device with accurate punctuation
Data Handling		• Children recognise that a range of • technology is used in places such as • homes and schools. • They select and use technology for particular purposes.	**NC Ref: Pupils should be taught to:** Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	**NC Ref: Pupils should be taught to:** Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
		• Able to identify a chart • Sort physical objects, take a picture and discuss what I have done • Present simple data on a digital device	• Sort images or text into two or more categories on a digital device • Collect data on a topic • Create a tally chart and pictogram • Record myself explaining what I have done and what it shows me	• Sort digital objects into a range of charts such as Venn diagrams, Carroll diagrams and bar charts using different apps and software • Orally record myself explaining what the data shows me • Create a branching database using questions

		NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Presentation, Web Design & E Book Creation	• Children recognise that a range of technology is used in places such as homes and schools. • They select and use technology for particular purposes.		
	• Record their voice over a picture • Create a simple digital collage • Move and resize images using their fingers or a mouse	• Add labels to an image • Order images to create a simple storyboard • Create a simple spider diagram • Sequence a series of pictures to explain my understanding of a topic	• Add voice labels to an image. • Add a voice recording to a storyboard. • Add speech bubbles to an image to show what a character thinks • Import images to a project from the web and camera roll
Animation	• Children recognise that a range of • technology is used in places such as homes and schools • They select and use technology for • particular purposes	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
	• Animate a simple image to speak in role • Create a simple animation to tell a story including more than one character	• Add filters and stickers to enhance an animation of a character • Create an animation to tell a story with more than one scene • Add own pictures to a story animation	• Create multiple animations of an image and edit these together • Create a simple stop motion animation. • Explain how an animation/flip book works
Video Creation	• Children recognise that a range of • technology is used in places such as homes and schools • They select and use technology for particular purposes	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
	• Knows the difference between a photography and video • Records a short film using the camera • Record and play a film • Watch films back	• Records a film using the camera app • Select images and record a voiceover • Highlight and zoom into images as they record	• Write and record a script using a teleprompter tool. • Use tools to add effects to a video • Beginning to use green screen techniques with support

		NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Digital Photography/Art	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes		
	• Take a photograph • Take a photograph and use it in an app • Use a painting app and explore the paint and brush tools	• Edit a photo using simple tools • Use a paint/drawing app to create a digital image • Begin to cut out an image to layer on another image	• Edit a photo (crop, filters, mark up etc) • Select and use tools to create digital imagery - controlling the pen and using the fill tool • Cut images with accuracy to layer on other images
Augmented Reality and Virtual Reality	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
	• Scan a QR code. • Explore a 360 image • Talk about AR objects in my class	• Explore an interactive 360 image • Scan a trigger image to begin an AR experience • Pretend to interact with AR objects	• Draw my own 360 image and explore it in VR • Bring objects into my surroundings using Augmented Reality • Create my own QR code
Sound	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content	NC Ref: Pupils should be taught to: Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content
	• Record sounds with different resources • Find ways to change your voice (tube, tin can, shouting to create an echo) • Record sounds/voices in storytelling and explanations	• Create a sequence of sounds (instruments, apps/software) • Explore short and long sounds • Record voice and add different effects	• Create a musical composition using software Record sound effects • Record voice over a compositions to perform a song

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Computer Science

Computational Thinking	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.1 Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Co2/1.2 Create and debug simple programs Co2/1.3 Use logical reasoning to predict the behaviour of simple programs	**NC Ref: Pupils should be taught to:** Co2/1.1 Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Co2/1.2 Create and debug simple programs Co2/1.3 Use logical reasoning to predict the behaviour of simple programs
	• Follow simple oral algorithms • Spot simple patterns • Sequence simple familiar tasks	• Understand what algorithms are • Write simple algorithms • Understand the sequence of algorithms is important • Debug simple algorithms • Understand that algorithms are implemented as programs on digital devices	• Write algorithms for everyday tasks • Use logical reasoning to predict the outcome of algorithms • Understand decomposition is breaking objects/processes down • Implement simple algorithms on digital devices (Bee Bots, Apps: Daisy the Dino) • Debug algorithms
Coding and Programming	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.1 Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Co2/1.2 Create and debug simple programs Co2/1.3 Use logical reasoning to predict the behaviour of simple programs	**NC Ref: Pupils should be taught to:** Co2/1.1 Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Co2/1.2 Create and debug simple programs Co2/1.3 Use logical reasoning to predict the behaviour of simple programs

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	• Use a mouse, touch screen or appropriate access device to target and select options on screen • Input a simple sequence of commands to control a digital device with support (Bee Bot)	• Create a simple program e.g., sequence of instructions for a Bee Bot • Use sequence in programs to locate and fix bugs in my program	• Understand programs execute by following precise and unambiguous instructions • Create programs on a variety of digital devices • Debug programs of increasing complexity • Use logical reasoning to predict the outcome of simple programs
Networks?	N/A	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.4 Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.4 Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies
		• Identify different types of technology • Identify a computer and its main parts • Use a mouse in different ways	• Recognise the uses and features of information technology in the home and beyond school • Explain how information technology benefits us • Recognise that choices are made when using information technology

Digital Literacy

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Self Image and Identity	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Recognise that they can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks them to do something that makes them me feel sad, embarrassed or upset. • Explain how this could be either in real life or online	• Recognise that there may be people online who could make them feel sad, embarrassed or upset • Give examples of when and how to speak to an adult they can trust. If something happens that makes them feel sad, worried, uncomfortable or frightened	• Explain how other people's identity online can be different to their identity in real life • Describe ways in which people might make themselves look different online • Give examples of issues online that might make them feel sad, worried, • uncomfortable or frightened. • Give examples of how they might get help
Online Relationships	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Recognise some ways in which the internet can be used to communicate • Give examples of how they (might) use technology to communicate with people they know	• Use the internet with adult support to communicate with people they know • Explain why it is important to be considerate and kind to people online	• Use the internet to communicate with people they don't know well (e.g. email a penpal in another school/ country) • Give examples of how they might use technology to communicate with others they don't know well

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Online Reputation	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Identify ways that they can put information on the internet	• Recognise that information can stay online and could be copied • Describe what information they should not put online without asking a trusted adult first	• Explain how information put online about themselves can last for a long time • Know who to talk to if they think someone has made a mistake about putting something online

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Online Bullying	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Describe ways that some people can be unkind online • Offer examples of how this can make others feel	• Describe and give examples of how to behave online in ways that do not upset others	• Give examples of bullying behaviour and how it could look online • Understand how bullying can make someone feel • Talk about how someone can/would get help about being bullied online or offline
Managing Online Information	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Talk about how I can use the internet to find things out • Identify devices I could use to access information on the internet • Give simple examples of how to find information (e.g. search engine, voice activated searching)	• Use the internet to find things out • Use simple keywords in search engines • Describe and demonstrate how to get help from a trusted adult or helpline if they find content that makes them feel sad, uncomfortable worried or frightened	• Use keywords in search engines • Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections) • Explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri) • Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'

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			• Explain why some information they find online may not be true
Health, Well-Being & Lifestyle	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Identify rules that help keep us safe and healthy in and beyond the home when using technology • Give some simple examples	• Explain rules to keep them safe when they are using technology both in and beyond the home • Give examples of some of these rules	• Explain simple guidance for using technology in different environments and settings • Say how those rules/guides can help them
Privacy and Security	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Identify some simple examples of their personal information (e.g. name, address, birthday, age, location) • Describe the people they can trust and can share this with • Explain why they can trust them	• Recognise more detailed examples of information that is personal to them (e.g. where they live, family's names, where they go to school) • Explain why they should always ask a trusted adult before they share any information about themselves online • Explain how passwords can be used to protect information and devices	• Describe why other people's work belongs to them • Recognise that content on the internet may belong to other people

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Copyright & Ownership	• Children recognise that a range of technology is used in places such as homes and schools • They select and use technology for particular purposes	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**NC Ref: Pupils should be taught to:** Co2/1.5 Recognise common uses of information technology beyond school Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies
	• Know that the work they create belongs to them • Name their work so others know it belongs to them	• Explain why work they create using technology belongs to them • Say why it belongs to them (e.g. 'it is my idea' or 'I designed it') • Save work so that others know it belongs to them (e.g. filename, name on content)	• Describe why other people's work belongs to them • Recognise that content on the internet may belong to other people

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