

Computing Overview

		Autumn Term	Spring Term	Summer Term
L e s s o n	Cycle A	Understand and use the terms 'algorithm' and 'debug' Turn a real-life situation into an algorithm by decomposing into smaller parts To identify an error in an algorithm and correct it Create a word document Basics – text, size, colour, underline etc Save document with name Create online content e.g. Book Creator	Use loop/repetition within code to avoid repeating commands Code multi-step programmes to follow a simple logical sequence Communicate and collaborate via an online platform e.g. padlet Carry out simple searches Understand how searches are ranked Digital Literacy E-Safety	Use 'if statements' for selection Create a word document More advanced – input pictures, columns, bullet points etc Save documents to the pupil drive using correct folders Evaluate different software for making posters
	Cycle B	Digital Art - Digital Self Portraits Programming - MicroBit LED Animations Presentation - Paper Based App Prototype Sound - Podcasting	Computer Networks - Network Explorer Programming - Animations in Scratch Physical Computing - Crumble powered historical scenes AR & VR - Creating 360 Images	Data Handling - Interactive Story Graphs Presentation - Interactive Comics Video Creation - Voiceover Film
Apps	Seesaw, Word, Pages, Google Docs Keynote Book Creator, Popplet Google Sheets, Google Forms, Excel, Numbers, Beebot, Scratch Jnr, Kodable, Tynker, Scratch 3, Hopscotch, Swift Playgrounds			
Computing Strand	Information Technology			
		NC Objectives	Skills/Knowledge	Key Vocabulary
	Word Processing/Typing	Co2/1.6 select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	I know how to use index fingers on keyboard home keys (f/j), use left fingers for a/s/d/f/g, and use right fingers for h/j/k/l I know how to edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows.	Touch type. Edit, format, font, size, borders, shadows, duplicate, organise, undo, redo, autocorrect, clipart
	Data Handling		I know how to create my own sorting diagram and complete a data handling activity using images and text I know how to start to input simple data into a spreadsheet.	Table, column, row, cell, spreadsheet, graph,
	Presentations, web design and eBooks		I know how to annotate an image with videos I know how to create a simple web page. I know how to design a simple app prototype. I know how to create a simple digital timeline/mindmap	Media, interactive, audio, annotate, background, clip art, prototype, web page, timeline,
	Animation		I know how to code a simple animation	Animation Frame, framerate, layout, onion skinning, trim
	Video Creation		I know how to sequence clips of mixed media in a timeline and record a voiceover.	Sequence, trim, cut, transition, trailer, close up, action shot, timeline

			<p>I know how to trim and cut film clips and add titles and transition.</p> <p>I know how to independently create a green screen clip.</p> <p>I know how to create my own movie trailer.</p>	
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Computer Science				
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		NC Objectives	Skills/Knowledge	Key Vocabulary
	Computational Thinking	Co2/1.1 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	<p>I know how to create algorithms for my programming projects</p> <p>I know how to decompose projects (such as an animation) into steps to create an algorithm</p> <p>I understand abstraction is focusing on important information</p> <p>I know how to identify patterns in an algorithm</p>	Abstraction, information, relevant, pattern, same, different, complex
	Coding and Programming	Co2/1.2 use sequence, selection, and repetition in programs; work with variables and various forms of input and output	<p>I know how to design a program</p> <p>I know how to create a program using a design</p> <p>I know how to create a sequence of code</p> <p>I know how to work with a variety of inputs and outputs</p> <p>I know how to evaluate my program</p>	Sequence, inputs, outputs, code, design, programming language, Scratch
	Computer Networks	Co2/1.3 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs		
		Co2/1.4 understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration		
		Co2/1.5 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	<p>I understand that the computers in a school are connected together in a network</p> <p>I understand why computers are networked</p>	Network, server, client, LAN (Local Area Network), switch

Digital Literacy				
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		NC Objectives	Skills/Knowledge	Key Vocabulary
	Self-Image and Identity		<p>I can explain what is meant by the term 'identity'.</p> <p>I can explain how people can represent themselves in different ways online</p> <p>I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why</p>	
	Online Relationships	Co2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact	<p>I can describe ways people who have similar likes and interests can get together online.</p> <p>I can explain what it means to 'know someone' online and why this might be different from knowing someone offline.</p> <p>I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with.</p> <p>I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried.</p> <p>I can explain how someone's feelings can be hurt by what is said or written online.</p> <p>I can explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos.</p>	Identify, represent, avatar, likes, trusting, uncomfortable, cyberbullying, accurate, autocomplete, belief, opinion, fact, mood, engaged, age restrictions, data, copyright, digital footprint
		Co2/1.4 understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration		
		Co2/1.5 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	<p>I can explain how to search for information about others online.</p> <p>I can give examples of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing anything personal.</p> <p>I can explain who someone can ask if they are unsure about putting something online</p>	
	Online Reputation			

	Online Bullying		<p>I can describe appropriate ways to behave towards other people online and why this is important.</p> <p>I can give examples of how bullying behaviour could appear online and how someone can get support.</p>	
	Managing Online Information		<p>I can demonstrate how to use key phrases in search engines to gather accurate information online.</p> <p>I can explain what autocomplete is and how to choose the best suggestion.</p> <p>I can explain how the internet can be used to sell and buy things.</p> <p>I can explain the difference between a 'belief', an 'opinion' and a 'fact' and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc.</p> <p>I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).</p> <p>I can describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened.</p>	
	Health, Wellbeing and lifestyle		<p>I can explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships; I can give some examples of both positive and negative activities where it is easy to spend a lot of time engaged (e.g. doing homework, games, films, videos).</p> <p>I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).</p>	
	Privacy and Security		<p>I can describe simple strategies for creating and keeping passwords private.</p> <p>I can give reasons why someone should only share information with people they choose to and can trust.</p> <p>I can explain that if they are not sure or feel pressured then they should tell a trusted adult.</p>	
	Copyright and Ownership		<p>I can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.</p>	