

Computing Overview

		Autumn Term	Spring Term	Summer Term
L e s s o n s	Cycle A	Computer Science: <ul style="list-style-type: none"> - 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 Information Technology Software: <ul style="list-style-type: none"> - Create a word document - Basics – text, size, colour, underline etc - Save document with name - Create online content e.g. Book Creator Digital Literacy E-Safety	Computer Science: <ul style="list-style-type: none"> - Use loop/repetition within code to avoid repeating commands - Code multi-step programmes to follow a simple logical sequence - Information Technology Uses: <ul style="list-style-type: none"> - Communicate and collaborate via an online platform e.g. padlet - Information Technology Searching: <ul style="list-style-type: none"> - Carry out simple searches - Understand how searches are ranked Digital Literacy E-Safety	Computer Science: <ul style="list-style-type: none"> - Use ‘if statements’ for selection Information Technology Software: <ul style="list-style-type: none"> - 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 Digital Literacy E-Safety
	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, Kahoot, Blooket, Doink Greenscreen, iMovie, Shadow Puppets Edu, Videorama, Apple Clips Explain Everything, Beebot, Scratch Jnr, Kodable, Tynker, Scratch 3, Hopscotch, Swift Playgrounds
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Computing Strand	Information Technology
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	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 combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets. I know how to confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text I know how to use font sizes appropriately for audience and purpose. Use spell check and thesaurus including through Siri and other AI technology	Group, crop, source, object, posters, documents, eBooks, scripts, leaflets. CTRL, spell check, thesaurus, record
Data Handling		I know how to create my own online multiple choice questionnaire. • I know how to input data into a spreadsheet and export the data in a variety of ways: charts, • bar charts, pie charts. I understand how data is collected.	Formatting, questionnaire, Active Cell, Autofit, multiple choice, checkbox
Presentations, web design and eBooks		I know how to create an interactive quiz eBook introducing hyperlinks. I know how to create an eBook with text, images and sound. I know how to create a presentation demonstrating my understanding with a range of media. I know how to create a digital timeline/mindmap and include different media - sound and video.	Animation, design template, effects, multimedia, eBook, ePub, export, hyperlinks
Animation		I know how to take multiple animations of a character I have created and edit them together for a longer video. I know how to use software to create a 3D animated story.	3D, line draw, build in, build out, exposure, dynamic

			I know how to create flip book animation using digital drawings and export as a GIF or video I know how to use line draw tool to create animations.	
	Video Creation		I know how to add music and sound effects to my films <ul style="list-style-type: none"> • I know how to add animated titles and transitions • I know how to add simple subtitles to a video clip. • I know how to use confidently use green screen adding animated backgrounds. 	Clips, media library, import, ken burns, subtitles, crop, overlay, adjust, playback, pan, tilt

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	I know how to use abstraction to focus on what's important in my design I know how to write more precise algorithms for use when programming I know how to use simple selection and repetition in algorithms I know how to use logical reasoning to detect and correct errors in programs	Logical reasoning, design, algorithmic thinking, selection, repeat
	Coding and Programming	Co2/1.2 use sequence, selection, and repetition in programs; work with variables and various forms of input and output	I know how to use repetition in programs I know how to use simple selection in programs I know how to work with a variety of inputs and outputs I know how to use logical reasoning to systematically detect and correct errors in programs	Repetition, loop, forever loop, count controlled loop, selection, condition, systematic
	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	I understand that servers on the Internet are located across the planet I understand the difference between the Internet and WWW I understand how web pages are viewed across the internet	Internet, router, data, web page, submarine cable

Digital Literacy				
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		NC Objectives	Skills/Knowledge	Key Vocabulary
	Self-Image and Identity	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 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	I can explain how identity online can be copied, modified or altered. I can demonstrate responsible choices about my online identity, depending on context.	Interact, livestream, healthy, unhealthy online behaviours, analyse, fake news, in- app purchases, pop-ups, bots, distraction, screen time, geolocation, adware, cookies,
	Online Relationships		I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms). I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.	
	Online Reputation		I can describe how to find out information about others by searching online. I can explain ways that some of the information about anyone online could have been created, copied or shared by others.	
	Online Bullying		I can recognise when someone is upset, hurt or angry online. I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).	

			<p>I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation).</p>	
	Managing Online Information		<p>I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.</p> <p>I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).</p> <p>I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.</p> <p>I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.</p> <p>I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be.</p> <p>I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.</p>	
	Health, Wellbeing and lifestyle		<p>I can explain how using technology can be a distraction from other things, in both a positive and negative way.</p> <p>I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.</p>	
	Privacy and Security		<p>I can describe strategies for keeping personal information private, depending on context. I can explain that internet use is never fully private and is monitored, e.g. adult supervision.</p> <p>I can describe how some online services may seek consent to store information about me</p> <p>I know how to respond appropriately and who I can ask if I am not sure.</p> <p>I know what the digital age of consent is and the impact this has on online services asking for consent.</p>	
	Copyright and Ownership		<p>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.</p> <p>I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.</p>	