



Computing Planning Overview

School Objectives:

- Clear vocabulary taught in each topic and built upon each year
- Opportunities to review and consolidate knowledge across year groups
- Develops learners' cultural capital

Year A		EYFS	Y1&2 A	Y1&2 B	Y3/4 A	Y3/4 B	Y5/6 A	Y5/6 B
Vocabulary		ICT, technology, program, click, drag, mouse, Beebot, e-safety	algorithm, sequence, execute, program, debug, input, output,		algorithm, sequence, execute, program, debug, input, output, sprite, internet, interface, variable, sequence, hyperlink, loop, wiki		sprite, internet, interface, variable, sequence, hyperlink, loop, wiki, blog, network, encrypt, decrypt, page rank, export, procedure	
Key Skills								
Computer Science	Problem Solving	Show an interest in ICT	- Understand what algorithms are		recognise the importance of user interface design		be discerning in evaluating digital content	
	Programming	-use control & directional language when programming Beebot	- Create a simple program -Debug their program		correct mistakes in their programs -change variables in programs		use iterative development techniques (making and testing a series of small changes) to improve their program.	
	Logical Thinking	-complete a simple program on the computer &/or perform simple functions on ICT equipment	- Predict the behaviour of simple programs -sort and classify a group of items by answering questions		use logical reasoning to explain how simple algorithms work		use logical reasoning to explain how simple algorithms work and detect and correct errors in algorithms and programs.	
Information Technology	Creating Content	-know how to operate simple ICT equipment	-know how to save, retrieve and change their work		work collaboratively and share files and ideas		select and use and combine a variety of software. - acknowledge intellectual property rights	
	Searching	Find out about & identify uses of everyday technology & use information to support learning	-use the web safely to find ideas for their work -take digital photographs		use the web to facilitate data collection - use search technologies effectively		understand some elements of how search engines select and rank results.	

Digital Literacy	E-Safety	-know what to, stop, think, tell an adult	-know what to do when encountering content that causes concern		be aware of online issues around sending emails and using the web		Appreciate the need to use complex passwords and keep them secure. -understand the safe use of mobile technology and GPS	
	Using IT beyond school	-use/simulate everyday technology through role-play -be aware of/identify technology in the local environment	-recognise common uses of IT beyond school eg talking books		understand computer networks including the internet		Have some understanding of how encryption works on the web.	
Topic		Use ICT to support & enhance learning in other subjects	We are Treasure Hunters (using programmable toys)	We are Painters (Creativity)	We are Programmers (Programming)	We are Bug Fixers (Programming)	We are Game Developers (Programming)	We are Cryptographers (Computational Thinking)
Key Knowledge		-explore teacher-led websites to find a desired page	-A programmable toy can be controlled by inputting a sequence of instructions.	-select and use appropriate painting tools to create and change images on the computer.	write a programme in scratch to create an animation.	recognise a number of common types of bugs in software	create original artwork and sound for a game	encrypt and decrypt messages in simple ciphers.
Software Familiarity		cbeebies	B-Bot	PaintZ	Scratch	Scratch	Scratch	Scratch
Topic		Use/simulate use of ICT equipment through role-play to find out about everyday uses of technology.	We are Storytellers (Communication)	We are Collectors (Computer Networks)	We are Communicators (Communicators)	We are Opinion Pollsters (Productivity)	We are Artists (Creativity)	We are Web Developers (Computer Networks)
Software Familiarity		pretend equipment in role-play eg. telephone, microwave, etc	Google Slides	Chrome/ Google Slides	Google Mail	Google Forms/ Google Sheets	Inkscape	Google Sites

Key Knowledge	-show through play use and understanding of everyday technology -select & use technology for a purpose	use sound recording equipment to record sounds	ask and answer binary (yes/no)N questions about their images	gain skills in using email	gain skills in using charts to analyse data	become familiar with the tools and techniques of a vector graphics package.	question the plausibility and quality of information
Topic	Follow rules on using IT equipment correctly	We are Photographers (Creativity)	We are Astronauts (Programming)	We are Software Developers (Programming)	We are Toy Designers (Computational Thinking)	We are Travel Writers (Productivity)	We are Bloggers (Communication)
Software Familiarity	CD Player, Beebot, PC, Chrome Book	Snapseed	Scratch	Scratch	Scratch	Google Maps/ Pixlr/ Google Slides	?learning platform?
Key Knowledge	-correct use of mouse, keyboard, CD player, digital camera, programmable toys	edit and enhance photographs	predict what a simple program will do	develop an educational game using selection and repetition	understand different forms of input and output	capture images, audio and video while on location	create a sequence of blog posts on a theme
Topic	Experience of & to operate ICT equipment.	We are Researchers (Computer Networks)	We are Zoologists (Productivity)	We are Musicians (Creativity)	We are Co-authors (Communicators)	We are Publishers (Communication)	We are Advertisers (creativity)
Key Knowledge	-click mouse to make something happen on screen -use mouse to select or move an object on screen -use arrow keys to direct or move -use mouse/ keyboard to enter/move things -enter letters on screen by using keyboard	create and deliver a short multimedia presentation	use simple charting software to create pictograms and other basic charts	use a program to create and edit music	write or a target audience using a wiki tool	design and produce a high quality print document	shoot suitable original footage and source additional content

Software Familiarity	PC, Chrome Books, head phones, CD player,	Google Slides	Google Sheets/ Pixlr	Isle of Tune	Google Docs/ Pixlr	Book Creator	WeVideo
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