Butts Primary School "one school, one community"	**Skills and Knowledge Progression** **Subject area: Computing**					
Domain Computer Science	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Sub-strand	**Progression statements**					
Problem solving	C.1.1.1. Understand what algorithms are.	C.2.1.1.Understand what algorithms are.	C.3.1.1. Design, write and debug programs that accomplish specific goals.	C.4.1.1. Design, write and debug programs that accomplish specific goals.	C.5.1.1. Design, write and debug programs that accomplish specific goals	C.6.1.1. Design, write and debug programs that accomplish specific goals.
	C.1.1.2 Understand how algorithms are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	C.2.1.2. The pupil can understand how algorithms are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.	C.3.1.2. Controlling or simulating physical systems.	C.4.1.2. Controlling or simulating physical systems.	C.5.1.2. Controlling or simulating physical systems.	C.6.1.2. Controlling or simulating physical systems.

			C.3.1.3: Solve problems by decomposing them into smaller parts	C.4.1.3. Solve problems by decomposing them into smaller parts.	C.5.1.3. Solve problems by decomposing them into smaller parts.	C.6.1.3. Solve problems by decomposing them into smaller parts.
Programming	C.1.2.1.Create and debug simple programs.	C.2.2.1. Create and debug simple programs.	C.3.2.1. Use sequence, selection and repetition in programs; work with variables.	C.4.2.1. Use sequence, selection and repetition in programs; work with variables.	C.5.2.1. Use sequence, selection, and repetition in programs; work with variables.	C.6.2.1. Use sequence, selection and repetition in programs; work with variables.
			C.3.2.2. Work with various forms of input and output	C.4.2.2. Work with various forms of input and output.	C.5.2.2. Work with various forms of input and output.	C.6.2.2. Work with various forms of input and output.
Logical thinking	C.1.3.1. Use logical reasoning to predict the behaviour of simple programs.	C.2.3.1. Use logical reasoning to predict the behaviour of simple programs.	C.3.3.1. Use logical reasoning to explain how some simple algorithms work.	C.4.3.1. Use logical reasoning to explain how some simple algorithms work.	C.5.3.1. Use logical reasoning to explain how some simple algorithms work.	C.6.3.1. Use logical reasoning to explain how some simple algorithms work.
			C.3.3.2. Use logical reasoning to detect and correct errors in algorithms and programs.	C.4.3.2. Use logical reasoning to detect and correct errors in algorithms and programs.	C.5.3.2. Use logical reasoning to detect and correct errors in algorithms and programs.	C.6.3.2. Use logical reasoning to detect and correct errors in algorithms and programs.
Wider understanding			C.3.3.3. Understand computer networks including the Internet.	C.4.3.3. Understand computer networks including the Internet.	C.5.3.3. Understand computer networks including the Internet.	C.6.3.3. Understand computer networks including the Internet.
			C.3.4.1. Understand how networks can provide multiple services, such as the World Wide Web.	C.4.4.1. Understand how networks can provide multiple services, such as the World Wide Web.	C.5.4.1. Understand how networks can provide multiple services, such as the World Wide Web.	C.6.4.1. Understand how networks can provide multiple services, such as the World Wide Web.

Domain Information Technology	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Creating content	C.1.1.1. Use technology purposefully to organise, store and retrieve digital content.	C.2.1.1. Use technology purposefully to organise, store and retrieve digital content.	C.3.1.1. Select, use and combine a variety of software (including Internet services) on a range of digital devices.	C.4.1.1. Select, use and combine a variety of software (including Internet services) on a range of digital devices.	C.5.1.1. Select, use and combine a variety of software (including Internet services) on a range of digital devices.	C.6.2.1. Use search technologies effectively.
	C.1.1.2. Use technology purposefully to create and manipulate digital content.	C.2.1.2. Use technology purposefully to create and manipulate digital content.	C.3.1.2. Design and create a range of programs, systems and content that accomplish given goals.	C.4.1.2. Design and create a range of programs, systems and content that accomplish given goals.	C.5.1.2. Design and create a range of programs, systems and content that accomplish given goals.	C.6.1.2. Design and create a range of programs, systems and content that accomplish given goals.
			C.3.1.3. Collecting, analysing, evaluating and presenting data and information.	C.4.1.3. Collecting, analysing, evaluating and presenting data and information.	C.5.1.3. Collecting, analysing, evaluating and presenting data and information.	C.6.1.3. Collecting, analysing, evaluating and presenting data and information.
Searching			C.3.2.2. Appreciate how search results are selected and ranked.	C.4.2.2. Appreciate how search results are selected and ranked.	C.5.2.2. Appreciate how search results are selected and ranked.	C.6.2.2. Appreciate how search results are selected and ranked.
Domain Digital Literacy	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
E-safety	C.1.1.1. Use technology safely and respectfully.	C.2.1.1. Use technology safely and respectfully.	C.3.1.1. Use technology safely, respectfully and responsibly.	C.4.1.1. Use technology safely, respectfully and responsibly.	C.5.1.1. Use technology safely, respectfully and responsibly.	C.6.1.1. Use technology safely, respectfully and responsibly.
	C.1.1.2. Keeping personal	C.2.1.2. Keeping personal information private.	C.3.1.2. Recognise acceptable/unacceptable behaviour.	C.4.1.2. Recognise acceptable/unacceptable behaviour.	C.5.1.2. Recognise acceptable/unacceptable behaviour.	C.6.1.2. Recognise acceptable/unacceptable behaviour.

	information private.					
	C.1.1.3. Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	C.2.1.3. Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	C.3.1.3. Know a range of ways to report concerns and inappropriate behaviour.	C.4.1.3. Know a range of ways to report concerns and inappropriate behaviour.	C.5.1.3. Know a range of ways to report concerns and inappropriate behaviour.	C.6.1.3. Know a range of ways to report concerns and inappropriate behaviour.
			C.3.1.X. Be discerning in evaluating digital content.	C.4.1.X. Be discerning in evaluating digital content.	C.5.1.X. Be discerning in evaluating digital content.	C.6.1.X. Be discerning in evaluating digital content.
			C.3.1.4. Understand the opportunities networks offer for communication and collaboration.	C.4.1.4. Understand the opportunities networks offer for communication and collaboration.	C.5.1.4. Understand the opportunities networks offer for communication and collaboration.	C.6.1.4. Understand the opportunities networks offer for communication and collaboration.
Using IT beyond school	C.1.2.1. Recognise common uses of information technology beyond school.	C.2.2.1. Recognise common uses of information technology beyond school.				

Switched on Computing Third Edition: Contents

Unit	Title	Focus	Main hardware/ software	Alternative hardware/ software	Computing PoS focus
1.1	We are treasure hunters	Solving problems using programmable toys	Blue-Bots Blue-Bot app	Other programmable toys Scratch Bee-Bot emulator	Computer Science: Coding
1.2	We are TV chefs	Filming the steps of a recipe	iPads Camera app iMovie	Laptop/desktop computers Digital cameras Android tablets WeVideo Microsoft Photos	Computer Science: Computational thinking
1.3	We are digital artists	Creating work inspired by great artists	iPads Brushes Redux Autodesk Sketchbook	Laptop/desktop computers Chromebooks Android tablets Microsoft Paint/Paint 3D PaintZ for Chromebook	Information Technology: Creativity
1.4	We are publishers	Creating a multimedia eBook about our achievements	iPads Book Creator Google Photos	Laptop/desktop computers Chromebooks Google Slides Microsoft PowerPoint	Digital Literacy: Online safety
1.5	We are rhythmic	Creating sound patterns in ScratchJr and GarageBand	iPads GarageBand ScratchJr	Laptop/desktop computers Chromebooks Scratch Audacity, LMMS, Soundtrap	Information Technology: Media
1.6	We are detectives	Using data to solve clues	iPads Popplet Google Forms Google Sheets	Laptop/desktop computers Chromebooks FreeMind, Bubbl.us, MindMeister Microsoft Forms and Excel	Information Technology: Data

Switched on Computing Third Edition: Contents

Unit	Title	Focus	Main hardware/ software	Alternative hardware/ software	Computing PoS focus
2.1	We are astronauts	Programming on screen in ScratchJr	iPads ScratchJr	Laptops/desktops/Chromebooks Android tablets Blue-Bots or Bee-Bots Scratch	Computer Science: Coding
2.2	We are games testers	Working out the rules for games	iPads Scratch Laptops/desktops/Chromebooks FixTheFactory	Android tablets Blockly Games	Computer Science: Computational thinking
2.3	We are photographers	Taking, selecting and editing digital images	iPads Camera app Photos app Snapseed	Android tablets Laptops/desktops/Chromebooks Digital cameras Pixlr, Windows Photos	Information Technology: Media
2.4	We are safe researchers	Researching a topic	iPads Popplet Google Slides Google custom search	Android tablets Laptops/desktops/Chromebooks FreeMind Microsoft PowerPoint, Keynote	Digital Literacy: Online safety
2.5	We are animators	Creating a stop-motion animation	iPads Stop Motion Studio	Android tablets Laptops/desktops/Chromebooks Digital cameras iStopMotion, Zu3D Stop Motion Animator	Information Technology: Media
2.6	We are zoologists	Collecting data about bugs	iPads Google My Maps Google Docs/Sheets/Slides Camera and Photos apps	Laptops/desktops/Chromebooks Digital cameras Windows Maps Microsoft suite	Information Technology: Data

Switched on Computing Third Edition: Contents

Unit	Title	Focus	Main hardware/ software	Alternative hardware/ software	Computing PoS focus
3.1	We are programmers	Programming an animation	Laptops/desktops/Chromebooks Scratch	Android tablets Cameras and microphones ScratchJr	Computer Science: Coding
3.2	We are bug fixers	Finding and correcting bugs	Laptops/desktops/Chromebooks Scratch Screen recorder software	Android tablets Snap!	Computer Science: Computational thinking
3.3	We are presenters	Videoing a presentation against a green screen	iPads Green screen background Tripods and iPad mounts Popplet iMovie	Camera app Microsoft Photos Adobe Premiere Elements	Information Technology: Media
3.4	We are who we are	Creating presentations about ourselves	Laptops/desktops/Chromebooks Google Slides Screen recorder software	iPads or Android tablets Microsoft PowerPoint	Digital Literacy: Online safety
3.5	We are co-authors	Producing a wiki	Laptops/desktops Google Sites Popplet	iPads or Android tablets Chromebooks	Information Technology: Media
3.6	We are opinion pollsters	Collecting and analysing data	Laptops/desktops/Chromebooks Google Forms Google Sheets Google Slides Google Drive	iPads or Android tablets Microsoft equivalents j2vote, j2data and j2office	Information Technology: Data

Switched on Computing Third Edition: Contents

Unit	Title	Focus	Main hardware/ software	Alternative hardware/ software	Computing PoS focus
4.1	We are software developers	Developing a simple educational game	Laptop/desktop computer Scratch	Snap! Pyonkee	Computer Science: Coding
4.2	We are makers	Coding for micro:bit	Laptop/desktop computer micro:bit Microsoft MakeCode	Crumble	Computer Science: Coding
4.3	We are musicians	Creating a piece of music in GarageBand	iPad GarageBand	LMMS	Information Technology: Media
4.4	We are bloggers	Sharing experiences and opinions	Laptop/desktop computer Digital camera WordPress or Blogger	Audio recorders or tablets	Digital Literacy: Online safety
4.5	We are artists	Fusing geometry and art	Laptop/desktop computer Scratch Inkscape Terragen	Logo Adobe Ideas Pyonkee Snap!	Computer Science: Coding
4.6	We are meteorologists	Recording and presenting the weather	Equipment for measuring weather Microsoft Excel Microsoft PowerPoint Keynote	Google suite	Information Technology: Data

Switched on Computing Third Edition: Contents

Unit	Title	Focus	Main hardware/ software	Alternative hardware/ software	Computing PoS focus
5.1	We are game developers	Developing an interactive game	Laptops/desktops/Chromebooks Scratch	Microphones (optional) Snap! Kodu	Computer Science: Coding
5.2	We are cryptographers	Cracking codes	Laptops/desktops/Chromebooks iPads or Android tablets Scratch	Snap!	Computer Science: Computational thinking
5.3	We are architects	Creating a virtual space	Laptops/desktops/Chromebooks iPads or Android tablets Trimble SketchUp Screen recorder	CoSpaces Minecraft Education Edition	Information Technology: Media
5.4	We are web developers	Making sense of the Internet and building a website	Laptops/desktops/Chromebooks iPads or Android tablets Google Chrome Google Sites	N/A	Digital Literacy: Online safety
5.5	We are adventure gamers	Creating an interactive adventure using presentation software	Laptops/desktops/Chromebooks Google Slides Voice recorder	iPads Microsoft PowerPoint	Information Technology: Media
5.6	We are VR designers	Experimenting with virtual and augmented reality	iPads or Android smartphones Google Cardboard Google Street View GarageBand CoSpaces	N/A	Information Technology: Media

Switched on Computing Third Edition: Contents

Unit	Title	Focus	Main hardware/ software	Alternative hardware/ software	Computing PoS focus
6.1	We are toy makers	Coding and physical computing	Laptops/desktops/Chromebooks micro:bits MakeCode Scratch	iPads or Android tablets	Computer Science: Coding
6.2	We are computational thinkers	Mastering algorithms for searching, sorting maths	Laptops/desktops/Chromebooks Scratch	iPads Snap!	Computer Science: Computational thinking
6.3	We are publishers	Creating a yearbook or magazine	Laptops/desktops/Chromebooks Digital cameras or iPads Google Docs	Book Creator Microsoft Word	Information Technology: Media
6.4	We are connected	Developing skills for social media	Laptops/desktops/Chromebooks Digital cameras or iPads School blogging platform Padlet	Audio recorders or other tablets	Digital Literacy: Online safety
6.5	We are advertisers	Creating a short television advert	Laptops/desktops/Chromebooks Digital cameras or tablets iMovie	Green Screen	Information Technology: Media
6.6	We are AI developers	Learning about artificial intelligence and machine learning	Laptops/desktops/Chromebooks iPads Scratch Machine Learning for Kids Audacity Google Chrome	Smart speaker (Google Home/ Amazon Echo)	Computer Science: Coding