Curriculum Overview for Computing

Year 3

Unit	Expectations	Computing PoS	Software/Apps	Hardware
3.1 **We are programmers** Programming an animation	• Create an algorithm for an animated scene in the form of a storyboard. • Write a program in Scratch to create the animation. • Correct mistakes in their animation programs.	• Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. • Use sequence ... in programs; work with variables and various forms of input and output. • Use logical reasoning to detect and correct errors in algorithms and programs. • Select, use and combine a variety of software ... to design and create ... content that accomplish(es) given goals, including ... presenting ... information.	**Software:** Scratch (recommended), Snap!, Microsoft PowerPoint®, Tux Paint, Scratch Jnr **Apps:** Pyonkee	Laptop or desktop computers (recommended) or tablets, cameras (optional), microphones (optional)
3.2 **We are bug fixers** Finding and correcting bugs in programs	• Develop a number of strategies for finding errors in programs. • Build up resilience and strategies for problem solving. • Increase their knowledge and understanding of Scratch. • Recognise a number of common types of bug in software.	• Debug programs that accomplish specific goals. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	**Software:** Scratch, Snap!, Screencast-o-matic (if appropriate) **Apps:** Snap! in the web browser (Scratch requires Adobe Flash® Player, which is not available on iPad), Pyonkee	Laptop/desktop computers, microphone (if appropriate)
3.3 **We are presenters** Videoing performance	• Gain skills in shooting live video, such as framing shots, holding the camera steady, and reviewing. • Edit video, including adding narration and editing clips by setting in/out points. • Understand the qualities of effective video, such as the importance of narrative, consistency, perspective and scene length.	• 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. • Work with various forms of input and output. • Use technology safely, respectfully and responsibly.	**Software:** Microsoft Windows Movie Maker® or iMovie, Kinovea/Dartfish **Apps:** iMovie/Coach's Eye	Digital cameras, flip cameras (or similar), tablet computers/iPod Touch or similar

3.4 **We are vloggers** Making and sharing a short screencast presentation	• Use a search engine to learn about a new topic. • Plan, design and deliver an interesting and engaging presentation. • Search for and evaluate online images. • Create their own original images. • Create a video slidecast of a narrated presentation. • Develop understanding of how the internet, the web and search engines work.	• Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of content that accomplish given goals, including collecting, analysing, evaluating and presenting information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Software:** Google, creative commons search engines, PowerPoint / Google Presentation, screencast-o-matic / QuickTime Player **Apps:** Safari, Explain Everything, Adobe Voice	Laptops/desktop PCs with microphones/tablet computers
3.5 **We are communicators** Communicating safely on the internet	• Develop a basic understanding of how email works. • Gain skills in using email. • Be aware of broader issues surrounding email, including 'netiquette' and online safety. • Work collaboratively with a remote partner. • Experience video conferencing.	• 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. • 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. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Software:** Email system (your school's own system, Gmail or another system), video conferencing software (Skype, Google Hangouts or Janet video conferencing), presentation software **Apps:** Skype, FaceTime, Hangouts	Webcam and speakers
3.6 **We are opinion pollsters** Collecting and analysing data	• Understand some elements of survey design. • Understand some ethical and legal aspects of online data collection. • Use the web to facilitate data collection. • Gain skills in using charts to analyse data. • Gain skills in interpreting results.	• 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. • 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.	**Software:** Web browser, Google Forms, Google Sheets and Google Slides/ InspireData®/Microsoft Excel® and Microsoft Word®/Freemind **Apps:** Google Drive/web browser	Laptop or desktop computer with internet connection