Cycle A	Unit Title	Expectations	Computing Programme of Study	Software / Apps	Hardware
Autumn 1	We are Photographers	• Consider the technical and artistic merits of photographs. • Use a digital camera or camera app. • Take digital photographs. • Review and reject or rate the images they take. • Edit and enhance their photographs. • Select their best images to include in a shared portfolio.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	**Software:** Picasa, Pixlr **Apps:** Photos (iOS), Snapseed	Desktop or laptop computers and digital cameras/tablets/ smartphones
Autumn 2	We are Treasure Hunters	• Understand that a programmable toy can be controlled by inputting a sequence of instructions. • Develop and record sequences of instructions as an algorithm. • Program the toy to follow their algorithm. • Debug their programs. • Predict how their programs will work.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs. • Recognise common uses of information technology beyond school.	**Software:** Programming interface for programmable toy Scratch Bee-Bot simulator **Apps:** Bee-Bot app; Daisy the Dinosaur; Blue-Bot app,	Programmable toy, such as a Bee-Bot or Roamer Too. Audio recorders are needed for the first step (your phone may be sufficient)

				Software	Hardware
Spring 1	We are Painters	• Use the web safely to find ideas for an illustration. • Select and use appropriate painting tools to create and change images on the computer. • Understand how this use of ICT differs from using paint and paper. • Create an illustration for a particular purpose. • Know how to save, retrieve and change their work. • Reflect on their work and act on feedback received.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	**Software:** Tux Paint/ Microsoft Paint/2Simple 2Paint A Picture/Fresh Paint, IWB software, Microsoft Word®, Microsoft PowerPoint® **Apps:** Brushes Redux, SketchBook Express, Fresh Paint	Laptop/desktop computers or tablets
Spring 2	We are Collectors	• Find and use pictures on the web. • Know what to do if they encounter pictures that cause concern. • Group images on the basis of a binary (yes/no) question. • Organise images into more than two groups according to clear rules.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. • Recognise common uses of information technology beyond school.	**Software:** Web browser, Microsoft PowerPoint® or IWB Software **Apps:** Web browser, Keynote or Explain Everything	Internet connection, laptop/ desktop computers

Grateley Primary School

		• Sort (order) images according to some criteria. • Ask and answer binary (yes/no) questions about their images.			
Summer 1	We are Storytellers	• Use sound recording equipment to record sounds. • Develop skills in saving and storing sounds on the computer. • Develop collaboration skills as they work together in a group. • Understand how a talking book differs from a paper-based book. • Talk about and reflect on their use of ICT. • Share recordings with an audience.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully.	**Software:** Microsoft PowerPoint®/2Create A Story/IWB software **Apps:** Keynote/Explain Everything/Book Creator	Computers/tablets, MP3 recorders/microphones
Summer 2	We are Celebrating	• Develop basic keyboard skills, through typing and formatting text. • Develop basic mouse skills. • Use the web to find and select images.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	**Software:** Microsoft PowerPoint®/Microsoft Word®/Clicker 7 **Apps:** Pages/Keynote, Brushes Redux/Sketchbook Express	Laptops/computers/tablets, printer

Grateley Primary School

		Develop skills in storing and retrieving files. • Develop skills in combining text and images. • Discuss their work and think about whether it could be improved.			

Cycle B	Unit Title	Expectations	Computing Programme of Study	Software / Apps	Hardware
Autumn 1	We are Game Testers	• Describe carefully what happens in computer games. • Use logical reasoning to make predictions of what a program will do. • Test these predictions. • Think critically about computer games and their use. • Be aware of how to use games safely and in balance with other activities.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs.	**Software:** Scratch, Kodu, Snap! **Apps:** Hopscotch, Daisy the Dinosaur, Pyonkee	Programmable toy, such as a Bee-Bot or Roamer Too
Autumn 2	We are TV Chefs	• Break down a process into simple, clear steps, as in an algorithm. • Use different features of a video camera. • Use a video camera to capture moving images. • Develop collaboration skills.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use logical reasoning to predict the behaviour of simple programs.	**Software:** Microsoft Paint, Microsoft Windows Live Movie Maker®/iMovie for OS X **Apps:** Brushes Redux,	Computers, cameras with movie mode/tablets

Grateley Primary School

				Software / Apps	Hardware
		• Discuss their work and think about how it could be improved.		iMovie	
Spring 1	We are Detectives	• Understand that email can be used to communicate. • Develop skills in opening, composing and sending emails. • Gain skills in opening and listening to audio files on the computer. • Use appropriate language in emails. • Develop skills in editing and formatting text in emails. • Be aware of online safety issues when using email.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	**Software:** Your school's email system, Microsoft Excel® Google Sheets **Apps:** Mail, Numbers, Google Sheets	Desktop or laptop computers or tablets; network access
Spring 2	We are Astronauts	• Have a clear understanding of algorithms as sequences of instructions. • Convert simple algorithms to programs. • Predict what a simple program will do. • Spot and fix (debug) errors in their programs.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs.	**Software:** Scratch, Kodu, Snap! **Apps:** Hopscotch, Daisy the Dinosaur, Pyonkee	Programmable toy, such as a Bee-Bot or Roamer Too
Summer 1	We are Researchers	• Develop collaboration skills through working as part of a group. • Develop research skills through searching for information on the internet. • Improve note-taking skills through the use of mind mapping. • Develop presentation skills through creating and	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	**Software:** FreeMind, bubbl.us, Google Custom Search, web browser, Microsoft PowerPoint® **Apps:** iThoughtsHD, Safari, Keynote, Popplet Lite, bubbl.us	Laptop or desktop computers or tablets, internet connection

Grateley Primary School

		delivering a short multimedia presentation.			
Summer 2	We are Zoologists	• Sort and classify a group of items by answering questions. • Collect data using tick charts or tally charts. • Use simple charting software to produce pictograms and other basic charts. • Take, edit and enhance photographs. • Record information on a digital map.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	**Software:** Microsoft Excel®/Google Sheets/IWB software, Picasa/Photo Gallery, Google My Maps/ Google Earth **Apps:** Numbers/Google Sheets, Snapseed, RunKeeper	Desktop or laptop computers with digital cameras/tablets, internet connection

Grateley Primary School