

	Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
EYFS	<p>Awesome Autumn (BF) Computer skills</p> <p>Can I recognise a range of technology that is used in places such as homes and schools? Can I select and use technology for a particular purpose? Can I name and use a keyboard and mouse with developing control? Can I access and use simple activities using touch technology with increasing control?</p> <p>Talk about good & bad choices in real life e.g. taking turns, saying kind things, helping others, telling an adult if something upsets you. • Play appropriate games on the Internet. • Talk about good and bad choices when using websites – being kind, telling a grown up if something upsets us & keeping ourselves safe by keeping information private.</p>	<p>Winter Warmers (BF) Computer skills</p> <p>Can I use a range of control toys and devices?</p> <p>Use a mouse to rearrange objects and pictures on a screen. • Recognise text, images and sound when using ICT. • Use a camera or sound recorder to collect photos or sound • Use paint programs to create pictures. • Begin to use a keyboard see programming • Develop an interest in ICT by using age appropriate websites or programs.</p>	<p>Boats Ahoy (BF) Computer skills</p> <p>Can I insert data into a pictogram, as a class? Can I answer simple questions relating to the pictogram as a class?</p> <p>Help adults operate equipment around the school, independently operating simple equipment • Use simple software to make things happen • Press buttons on a floor robot and talk about the movements • Explore options and make choices with toys, software and websites</p>	<p>Springtime (BF) Computer skills</p> <p>Can I talk about what they are doing on a computer? Can I say if something they find on the internet makes them feel bad? Can I speak to an adult about what they have seen? Can I follow the school's safer internet rules?</p> <p>Recognise purposes for using technology in school and at home. • Understand that things they create belong to them and can be shared with others using technology. • Recognise that they can use the Internet to play and learn.</p>	<p>Busy Bodies (BF) Computer skills</p> <p>Can I write my name using a keyboard on different devices? Can I use the caps lock for the initial sound in their name? Can I use a simple paint programme with increasing mouse control? Can I understand the purpose of and experiment with hardware such as cameras, computers, ipads, voice recorders etc?</p> <p>Collect information as photos or sound files. • Use a simple pictogram or set of photos to count and organise information.</p>	<p>Summer Fun (BF) Computer skills</p> <p>Can I write my name using a keyboard on different devices? Can I use the caps lock for the initial sound in their name? Can I use a simple paint programme with increasing mouse control? Can I understand the purpose of and experiment with hardware such as cameras, computers, ipads, voice recorders etc?</p>

	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?
	This unit builds on the students understanding of technology around them. The computing skills begin to build students abilities in using various forms of technology around them.	This unit builds on the students understanding of technology around them. The computing skills begin to build students abilities in using various forms of technology around them.	This unit builds on the students understanding of technology around them. The computing skills begin to build students abilities in using various forms of technology around them.	This unit builds on the students understanding of technology around them. The computing skills begin to build students abilities in using various forms of technology around them.	This unit builds on the students understanding of technology around them. The computing skills begin to build students abilities in using various forms of technology around them.	This unit builds on the students understanding of technology around them. The computing skills begin to build students abilities in using various forms of technology around them.
	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	Choices Internet Website	Equipment Buttons Movement Screen Mouse Images Keyboard Paint	Screen Mouse Images Keyboard Paint	Technology Share Create Internet	Collect Set of photos Count Organise	Equipment Buttons Movement Screen Mouse Images Keyboard Paint
Year 1	Technology around us CS, AL Recognising technology in school and using it responsibly.	Digital painting ET, CM Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.	Moving a robot AL, PG Writing short algorithms and programs for floor robots, and predicting program outcomes.	Grouping data DI, AL Exploring object labels, then using them to sort and group objects by properties.	Digital writing ET, CM Using a computer to create and format text, before comparing to writing non-digitally	Programming animations PG, DD Designing and programming the movement of a character on screen to tell stories.
	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?
	This unit progresses students' knowledge and understanding of technology and how they interact with it in school.	This unit builds on the students' knowledge and understanding of devices, usernames	This unit progresses learners' knowledge and understanding of giving and following instructions. It moves	This unit will introduce learners to data and information. It will introduce learners to the concept of labelling	This unit progresses the learners' knowledge and understanding of using computers to create	This unit progresses learners' knowledge and understanding of programming and follows on from

	Learners will build their knowledge of parts of a computer and develop the basic skills needed to effectively use a computer keyboard and mouse. This unit directly precedes the Y2 Computer systems and networks unit, IT around us	and passwords. Learners will build on their skills of using a keyboard and mouse.	from giving instructions to each other to giving instructions to a robot by programming it.	and grouping objects based on their properties. Learners will develop their understanding that objects can be given labels, which is fundamental to their future learning concerning databases and spreadsheets. In addition, learners will begin to improve their ability to use dragging and dropping skills on a device. Following this unit, in year 2, learners will present data graphically in pictograms.	and manipulate digital content, focussing on using a word processor. The learners will develop their ability to find and use the keys on a keyboard in order to create digital content. The learners are then introduced to manipulating the resulting text, making cosmetic changes, and justifying their reason for making these changes. Following this unit, learners will further develop their digital writing skills in the Year 3 – ‘Desktop publishing’ unit and the Year 6 – ‘Web page development’ unit.	‘Programming A – Moving a robot’, where children will have learned to program a floor robot using instructions.
	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	Rules Online Private information Email	Instructions Buttons Robots Patterns Program Algorithm	Instructions Buttons Robots Patterns Program Algorithm	Photographs Video Sound Data Pictogram Digitally	Videos Camera stills Sounds Image bank Word bank Space bar	Videos Camera stills Sounds Image bank Word bank Space bar Instructions Buttons Robots Patterns Program Algorithm

Year 2	<p>Information technology around us NW, CS</p> <p>Identifying IT and how its responsible use improves our world in school and beyond.</p>	<p>Digital photography ET, CM</p> <p>Capturing and changing digital photographs for different purposes.</p>	<p>Robot algorithms AL, PG</p> <p>Creating and debugging programs, and using logical reasoning to make predictions.</p>	<p>Pictograms DI, ET</p> <p>Collecting data in tally charts and using attributes to organise and present data on a computer.</p>	<p>Making Music CM, DD</p> <p>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition</p>	<p>Programming quizzes PG, DD</p> <p>Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.</p>
	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?
	<p>This unit progresses learners' understanding of technology and how they interact with it. They will develop this understanding to become familiar with the term information technology and will be able to identify common features of IT. This unit also builds on the learners' understanding of using technology safely and responsibly.</p>	<p>This unit begins the learners' understanding of how photos are captured and can be manipulated for different purposes. Following this unit, learners will develop their photo editing skills in Year 4.</p>	<p>In advance of the lessons in this Year 2 unit, learners should have had some experience of creating short programs using floor robots and predicting the outcome of a simple program. This unit progresses learners' knowledge and understanding of algorithms and how they are implemented as programs on digital devices. Learners will spend time looking at how the order of commands affects outcomes. Learners will use this knowledge and logical reasoning to trace programs and predict outcomes.</p>	<p>This unit progresses students' knowledge and understanding of grouping data. It builds on the Year 1 Data and Information unit where learners labelled objects and grouped them based on different properties. In Year 3 learners develop their understanding of attributes (properties) using branching databases to structure data according to different object attributes.</p>	<p>Learners should have experience of making choices on a tablet/computer, and they should be able to navigate within an application. Learners should also have some experience of patterns. This unit progresses students' knowledge through listening to music and considering how music can affect how we think and feel. Learners will then purposefully create rhythm patterns and music.</p>	<p>This unit progresses learners' knowledge and understanding of instructions in sequences and the use of logical reasoning to predict outcomes.</p>
	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	<p>Appropriate/inappropriate sites Cyber-bullying Digital footprint Keyword searching</p>	<p>Visual effects Templates Animation Documents Index finger typing</p>	<p>Forward Backward Right-angle turn Algorithm Sequence</p>	<p>Capturing moments Magnified images Questions Data collection Graphs</p>	<p>Sound effects Templates Animation Documents Index finger typing</p>	<p>Forward Backward Right-angle turn Algorithm Sequence</p>

		Enter/return Caps lock Backspace	Debug Predict	Charts Save Retrieve	Enter/return Caps lock Backspace	Debug Predict
Year 3	Connecting computers NW, CS Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	Stop-frame animation ET, CM Capturing and editing digital still images to produce a stop-frame animation that tells a story.	Sequencing sounds PG, DD Creating sequences in a block-based programming language to make music.	Branching databases DI, ET Building and using branching databases to group objects using yes/no questions.	Desktop publishing ET, CM Creating documents by modifying text, images, and page layouts for a specified purpose.	Events and actions in programs PG, DD Writing algorithms and programs that use a range of events to trigger sequences of actions.
	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?
	This unit progresses learners' knowledge and understanding of technology by focusing on digital and non-digital devices, and introducing the concept of computers connected together as a network. Following this unit, learners will explore the internet as a network of networks.	This unit progresses students' knowledge and understanding of using digital devices to create media, exploring how they can create stop-frame animations. Following this unit, learners will further develop their video editing skills in Year 5.	This unit assumes that learners will have some prior experience of programming; the KS1 NCCE units cover floor robots and ScratchJr. However, experience of other languages or environments may also be useful.	This unit progresses learners' knowledge and understanding of the categories of data handling, with a particular focus on implementation. It builds on their knowledge of data and information from key stage 1. They will continue to develop their understanding of attributes and begin to construct and interrogate branching databases as a means of displaying and retrieving information.	This unit progresses learners' knowledge and understanding of using digital devices to combine text and images building on work from the following units; Digital Writing Year 1, Digital painting Year 1, and Digital Photography Year 2.	This unit assumes that learners will have some prior experience of programming. The key stage 1 National Centre for Computing Education units focus on floor robots and ScratchJr, however experience of other languages or environments may also be useful. The Year 3 — Programming A unit introduces the Scratch programming environment and the concept of sequences.
	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	E-safety rules Secure passwords Report abuse button Gaming Blogs	Multimedia Presentations Alignment Brush size Repeats	Sequence instructions Sequence debugging Test + improve Logo commands Sequence programming	Questioning Database Construct Contribute Recording data	Multimedia Presentations Alignment Brush size Repeats	Sequence instructions Sequence debugging Test + improve Logo commands Sequence programming

	School network Devices Computer parts Collaborate Appropriate online communication Search tools Appropriate websites Owner	Reflections Green screening Amend Copy Paste		Data logger Present data	Reflections Green screening Amend Copy Paste	
Year 4	The internet NW, SS Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	Repetition in shapes AL, PG Using a text-based programming language to explore count-controlled loops when drawing shapes.	Audio editing ET, CM Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	Data logging CS,DI Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	Photo editing ET, CM Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled	Repetition in games PG, DD Using a block-based programming language to explore count-controlled and infinite loops when creating a game.
	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?
	This unit progresses students' knowledge and understanding of networks in Year 3. In Year 5, they will continue to develop their knowledge and understanding of computing systems and online collaborative working.	This unit assumes that learners will have some prior experience of programming. The KS1 NCCE units cover floor robots and ScratchJr, and Scratch is introduced in the Year 3 programming units. However, experience of other languages or environments may also be useful.	This unit progresses students' knowledge and understanding of creating media, by focusing on the recording and editing of sound to produce a podcast. Following this unit, learners will explore combining audio with video in the 'Video editing' unit in Year 5.	This unit progresses learners' knowledge and understanding of data and how it can be collected over time to answer questions. Specifically, it builds on the concept of answering questions with data which is first introduced in the KS1 data and information units. The unit also introduces the idea of automatic data collection. Learners are also introduced to data in tables and graphs, knowledge they will build on in the Year 5	This unit progresses students' knowledge and understanding of digital photography and using digital devices to create media. Following this unit, learners will further develop their image editing skills in Year 5 – Vector drawing.	This unit progresses students' knowledge and understanding of programming. It progresses from the sequence of commands in a program to using count-controlled loops. Pupils will create algorithms and then implement those algorithms as code.

				unit (flat file databases) and the Year 6 unit (spreadsheets).		
	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	Different networks Information collection Reliability Owners	Type + edit logo commands Sensors Open-ended problems Bugs in programs Complex programming	Creating + modifying Specific purpose Photo modifying Keyboard shortcuts Bullet points Spell check Constructive feedback	Database creation Database searches Inaccurate data	Creating + modifying Specific purpose Photo modifying Keyboard shortcuts Bullet points Spell check Constructive feedback	Type + edit logo commands Sensors Open-ended problems Bugs in programs Complex programming
Year 5	Sharing information NW, ET Identifying and exploring how information is shared between digital systems.	Video editing CM, DD Planning, capturing, and editing video to produce a short film.	Selection in physical computing PG, CS Exploring conditions and selection using a programmable microcontroller.	Vector drawing ET, CM Creating images in a drawing program by using layers and groups of objects	Flat-file databases DI, ET Using a database to order data and create charts to answer questions.	Selection in quizzes AL, PG Exploring selection in programming to design and code an interactive quiz.
	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?
	This unit progresses learners' knowledge and understanding of computing systems.	This unit progresses learners' knowledge and understanding of creating media by guiding them systematically through the process involved in creating a video. The unit builds on the Year 4 unit 'Photo editing' where composition is introduced and the Year 3 unit 'Stop-frame animation' where learners explored some of the features of video production. By the end	This unit assumes that learners will have prior experience of programming using a block-based language (eg Scratch) and understand the concepts of sequence and repetition. The National Centre for Computing Education key stage 1 units focus on floor robots and ScratchJr, however, experience of other languages or	This unit progresses learners' knowledge and understanding of digital painting and has some links to the Year 3 'Creating media – Desktop publishing' unit, in which learners used digital images. In this Year 5 unit, learners create images that could be used in desktop publishing documents.	This unit progresses learners' knowledge and understanding of why and how information might be stored in a database, and looks at how tools within a database can help us to answer questions about our data. It moves on to demonstrate how a database can help us display data visually, and how real-life databases can be used to help us solve	This unit assumes that learners will have prior experience of programming using block-based construction (e.g. Scratch), understand the concepts of 'sequence' and 'repetition', and have some experience of using 'selection'. Ideally, learners will have completed 'Programming A – Selection in physical computing' before

		of this unit, learners will have developed the skills required to plan, record, edit, and share a video.	environments may also be useful.		problems. Finally, the learners create a presentation showing understanding and application of all the tools used within the unit.	undertaking this unit, as this will provide them with the required knowledge of 'selection'.
	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	Computing devices Internet parts Collaboration Responsibility Searching strategies Webpages Responsible online communication Informed choices Virus threats Blogs Messaging	Online sharing Multimedia effects Multimedia modification Transitions Hyperlinks Editing tools Refining Online sharing	Explore procedures Refine procedures Variable Hardware + software control Change inputs Different outputs Articulate solutions Commands	Online sharing Multimedia effects Multimedia modification Transitions Hyperlinks Editing tools Refining Online sharing	Spreadsheets Complex searches (and/or: </>) Problem solving Present answers Analyse information Question data Interpret	Explore procedures Refine procedures Variable Hardware + software control Change inputs Different outputs Articulate solutions Commands
Year 6	Internet communication NW, ET Recognising how the WWW can be used to communicate and be searched to find information	Webpage creation CM, DD Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.	Variables in games PG, DD Exploring variables when designing and coding a game.	Introduction to spreadsheets ET, DI Answering questions by using spreadsheets to organise and calculate data.	3D modelling ET, CM Planning, developing, and evaluating 3D computer models of physical objects	Sensing PG, CS Designing and coding a project that captures inputs from a physical device.
	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?	Why this? Why now?
	This unit progresses learners' knowledge and understanding of computing systems and online collaborative working.	This unit progresses students' knowledge and understanding of the following: digital writing, digital painting, desktop publishing, digital photography, photo editing, and vector drawing.	This unit assumes that learners have some prior experience of programming in Scratch. Specifically, they should be familiar with the programming constructs of sequence, repetition, and	This unit progresses students' knowledge and understanding of data, and teaches them how to organise and modify data within spreadsheets. Specifically, learners will have experienced	This unit progresses students' knowledge and understanding of creating 3D graphics using a computer. Prior to undertaking this unit, learners should have worked with 2D graphics applications.	This unit presumes that pupils are already confident in their understanding of sequence, repetition and selection independently within programming. If pupils are not yet ready for

			selection. These constructs are covered in the Year 3, 4, and 5 National Centre for Computing Education programming units respectively. Each year group includes at least one unit that focuses on Scratch.	data in tables and charts in the Y4 data logging and Y5 branching database units.		this, you may wish to revisit earlier programming units where these constructs are introduced.
	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	Responsible online communication Informed choices Virus threats Blogs Messaging Information movement Connecting devices Different audiences Research strategies Search result rankings Acknowledge resources	Appropriate online tools Audience Atmosphere Structure Copyright Information collection HTML code Storing	Predicting outputs Plan, program, test & review a program Program writing Control mimics + devices Sensors Measure input Create variables Link errors	Generate Process Interpret Store Present information Plausibility Appropriate data tool Interrogate Investigations	Appropriate online tools Audience Atmosphere Structure Copyright Information collection HTML code Storing	Predicting outputs Plan, program, test & review a program Program writing Control mimics + devices Sensors Measure input Create variables Link errors

Key

AL Algorithms

CS Computing systems

CM Creating media

DI Data and information

DD Design and development

ET Effective use of tools

NW Networks

PG Programming

SS Safety and security

IT Impact of technology