

		Nursery	Reception	ELG	Outcomes		
ELG: Personal, Social and Emotional Development		Remember rules without needing an adult to remind them	Show resilience and perseverance in the face of a challenge. Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'	Managing Self: Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Explain the reasons for rules, know right from wrong and try to behave accordingly	Computer Science Begin to use instructional language when using technology. To use appropriate technological language to describe computers. Information Technology To know how to turn a device on and learn how to use a touch screen device and a mouse. To complete basic instructions on an iPad. To programme a Bee-bot device to move forwards, backwards and to make left and right turns.		
ELG: Physical development		Match their developing physical skills to tasks and activities in the setting	Develop their small motor skills so that they can use a range of tools competently, safely and confidently		To begin using personal log in details to log in		
ELG: Understanding the World		Explore how things work			Digital Literacy To identify a trusted adult		
ELG: Expressive Art and Design			Explore, use and refine a variety of artistic effects to express their ideas and feelings	Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function			
Computing		Year 1			Year 2		
		Autumn 1	Spring 1	Summer 1	Autumn 1	Spring 1	Summer 1
	Key program	Beebots	BusyThings computing	J2Code- JIT	J2Code- Visual	J2Code- Logo Level 1/2/3	J2Code- Visual
	Understand what algorithms are; how they are implemented as	To understand a directional command	To sequence instructions in a logical order to achieve a	To apply directional command to a range of sprites/ avatars,	To understand repeat functions and why they may be used	To understand that block code can be represented in different ways,	To change the format of a program-skins/ backgrounds.

	<p>programs on digital devices; and that programs execute by following precise and unambiguous instructions</p>		<p>desired outcome</p>	<p>coordinating desired outcomes to create a simple narrative</p> <p>To understand what a block of coding is and explain this to a peer</p>	<p>To understand what a block of coding is and explain this to a peer</p> <p>Can explain how to use the following terms in a computer program: Command, Repeat, Input, Output</p>	<p>(typed instruction)</p> <p>To apply understanding of repeat functions to typed command</p> <p>To understand that algorithms are implemented into digital devices as programs</p>	<p>Can explain how to use the following terms in a computer program: Command, Repeat, Input, Output, Control, Motion</p>
	<p>create and debug simple programs</p>	<p>To understand that in computer programs, inputs create outcomes</p>	<p>To read simple programmes</p> <p>To write simple programs to control 1 sprite/avatar using directional command</p>	<p>Can create a simple program in which 2 or more sprites/avatars follow directional command</p> <p>Pen up/ pen down functions</p>	<p>To write simple programs to draw simple shapes</p> <p>To use repeat functions to draw simple shapes</p> <p>To input text commands into a program</p>	<p>To write simple programs involving directional command/ repeat functions using typed instruction</p> <p>Pen up/ pen down functions</p> <p>To test a peers program and suggest logical solutions to problems that occur</p>	<p>To write a simple program which involves changing a sprite/ avatars skin and changing its size.</p> <p>Can record and evaluate a simple program using repeat functions.</p> <p>Pen up/ pen down functions</p>

							To manipulate sprites/ /avatars using text
	use logical reasoning to predict the behaviour of simple programs	To predict and test an outcome	Use predict the behaviour of simple programs by reading block code	To explain plausible solutions to simple bugs and begin to apply	Predict the outcomes of programs that include repeat functions by reading block code	Predict the written commands needed to execute a directional command; predict the meaning of shorthand command (level 3). Predict the degree of turn for quads and triangles.	When shown completed program, predict the outcome of the commands in Looks section: Say... Switch costume to... Change size by...
Key program		Autumn 2	Spring 2	Summer 2	Autumn 2	Spring 2	Summer 2
		JIT- Paint/ Write	J2E- Data	J2E- Office Writer	JIT 5- Animate	Databases	J2E Office-Writer
Information Technology	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	To be able to log in using own unique log in details To be able to navigate a computer effectively, using a mouse/ touchpad To be able to name and save their own work	Collect and record class data using pictogram template on J2E Data. To understand and explain what created pictograms represent. Select own category	To locate keys on a keyboard to type a sentence, using a full stop and capital letter. To communicate and share ideas respectfully and appropriately with others	To manipulate sprite/avatars using stop motion technology To present digital content to peers To predict and execute logical steps needed to make a sprite/ avatar move in continuous motion	To understand how databases retrieve information based on set criteria To create a branching database using given data. To program	To be able to change font and size of text. To be able to change the appearance of lettering and numbers(bold, underline, italics, colours).

		<p>in their own document area</p> <p>To be able to select, insert and resize a picture from selection within a document</p> <p>To be able to locate keys on a keyboard to be able to write a simple sentence/ word</p>	<p>images using label fields independently in J2E Data.</p> <p>Charts Collect and record class data using a table and a bar chart.</p> <p>Manipulate findings by creating variables. Explain and compare findings using a range of charts.</p>		<p>To test and adjust outcome to achieve desired effect</p> <p>To evaluate peers work based on taught skills used</p>	<p>relevant questions into a branching database in order to retrieve related information.</p> <p>To understand outcomes of a branch database will change dependent on how questions are answered- this is a variable as it does not stay the same.</p>	<p>To use appropriate punctuation accurately.</p> <p>To insert pictures and borders.</p>
	<p>Recognise common uses of information technology beyond school</p>	<p>To name common technology used and suggest what it may be used for</p>	<p>To understand what a computer is used for in relation to school and home</p>	<p>To understand that specific programs/ technologies are used to create/ complete specific tasks</p>	<p>To understand that animation used for cartoons/ plasticine models is created in a similar way using small steps.</p>	<p>To understand what a search engine is and how it works.</p>	<p>To begin to understand that online games etc are made using coding/ programming</p>

E- safety	Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies	Autumn lessons: Personal information; Staying SMART online	Spring lessons: Owning your creative work; Safe image searching	Summer lessons: What is email?; Keeping safe online	Autumn lessons: Digital footprints; Keywords	Spring lessons: you be the judge; Rate and review	Summer lessons: Be Kind Online; Cyber Snakes and Ladders
------------------	---	---	--	---	---	---	---

Computing	Year 3			Year 4		
	Autumn 1 & 2		Summer 1	Autumn 2		Summer 1
Key program	Hive Hackers		J2E Code Visual	J2E Code Visual		Busy Things Disco Code
Design write and debug programs that accomplish specific goals,.....solve problems by decomposing them in smaller parts	Unit covers: Sequencing Loops Debugging Forever loops Conditionals Events To understand the concepts of the above and to plan simple programs which accomplish these objectives.		To explain and discuss simple programs using correct related vocabulary To create an 'if' statement in their program To present work to an audience using relevant software and key language	To explain and discuss simple programs using correct related vocabulary To manipulate 2 sprites in coordination to achieve a desired outcome To use a variable to alter an algorithm		Unit covers: Loops Conditionals Events Variables To develop key learning from Year 3. To introduce the concept of variables and how these may alter the outcome of a given program.

					<p>To create an 'if/else' statement in a program</p> <p>To use coordinates to direct a sprite</p> <p>To present work to an audience using relevant software and key language</p>		
	<p>Use sequence, selection and repetition in programs</p>	<p>See above</p> <p>To understand that a loop is a form of repeat function</p> <p>To understand how loops differ from forever loops and how this impacts a program</p>		<p>See above</p>	<p>See above</p>		<p>To understand that a loop is a form of repeat function</p> <p>To sequence a range of loops within a program to create a desired, repeat outcome</p>
	<p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>	<p>To understand that bugs may be created when computers do not understand inputs correctly</p> <p>To evaluate the effectiveness of a program and</p>		<p>To identify areas of development within a program and to test a range of hypothesis to find the best outcome</p>	<p>To debug systems and solve problems by breaking down computing problems into smaller parts</p>		<p>To debug more complex programs by analysing specific loops in isolation of the main program</p>

		to identify areas for development					
E- safety	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Autumn lessons: What is cyberbullying? To buy or not to buy	Spring lessons: Keep it to yourself; Emailing	Summer lessons: Online Communication; Party planners	Autumn lessons: Online communication, 1 & 2	Spring lessons: Online communication, 3 & 4	Summer lessons: Online communication, 5 & 6

		Year 3			Year 4		
Key program		Spring 1 & 2	Summer 2	Autumn 1	Spring 1 & 2	Summer 2	
		J2E Office-Writer Adobe Spark-webpages	BusyThings-Music, Composing	Stop Frame Animator- LGFL Content J2E Office-Writer	J2E Office-Spreadsheet History of Computing	Adobe Express	
Information Technology/Digital Literacy	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content;	To use Google to search for related images To use search engines to carry out related research to inform writing	To use internet search to listen to a range of music periods. To understand that search engines are separated into more specific areas-	Office Writer-revisit Year 3 objectives to embed when writing instructions to create a stop motion movie. Stop motion animator:	Can describe a cell location within a spreadsheet using the notation of a letter for the column followed by a number for the row	To use Google to search for related images To use Google to search for related images To use search engines to carry out related	

	<p>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</p>		<p>Can structure search queries to locate specific information</p> <p>To understand how results are ranked</p> <p>To understand the concept of trusted sites</p> <p>To be introduced to the concepts of fake/ trusted sources</p> <p>To create a screen shot using print screen/ snipping tools</p> <p>To understand and apply shorthand keyboard commands for copy & paste</p> <p>Revisit: to format the size, font and appearance of text</p>	<p>identify maps/ video/ images etc</p> <p>Use a range of composition programs to copy and repeat given rhythms and melodies.</p> <p>To present to class, explaining steps taken to create composition.</p> <p>To present work to an audience using relevant software and key language</p>		<p><i>To consider the sequence needed to create fluid motion</i></p> <p><i>To add sound to enhance a frame</i></p> <p><i>To manipulate the speed and scale of moving objects</i></p> <p><i>To understand and appreciate how movies can be made</i></p>	<p>Can find specified locations in a spreadsheet</p> <p>To format cells within a spreadsheet, including flood filling colour</p> <p>To create borders for cells, including formatting tables</p> <p>To input information and use this to make a range of graphs to accurately represent data</p> <p>To identify the X and Y axis on a bar chart and name appropriately to reflect data capture.</p> <p><i>To understand how technology has evolved over time.</i></p>	<p>research to inform writing</p> <p>Can structure search queries to locate specific information</p> <p>To understand how results are ranked</p> <p>To compare information across a range of sources to discern which is the most trustworthy and explain why</p> <p>Adobe Spark information formatting- Revisit and consolidate Autumn 1 objectives</p>
--	---	--	--	--	--	--	---	---

			<p>To align text using toolbar commands, (left/ centre/ right/ justified)</p> <p>To format lists using bullet points, numbering.</p> <p>To use appropriate punctuation when typing, including locating shift for question marks and exclamations</p> <p>To insert and format a text box</p> <p>To present information in varying formats dependent on audience and purpose</p> <p>To present work to an audience using relevant software and key language</p>		<p>To study a range of significant figures, both at home and abroad</p> <p>To understand and appreciate the role of women in the development of past and future technologies</p> <p>To understand how current technologies influence our lives from both positive and negative perspectives</p> <p>How current communication has been impacted by the development of smart phones</p> <p>Children will hypothesise future technologies.</p>	
--	--	--	---	--	---	--

Key program		Year 5			Year 6			
		Autumn 1	Spring 1	Summer 1	Autumn 2		Summer 1 & 2	
		J2E Microbit	J2E- Logo	Python Tutor	Web Technology Tutor		J2E Visual	
Computing	design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts	<p>To understand that a microbit is a small programmable computer</p> <p>To name some of the parts of a microbit computer and explain their functions</p> <p>To program and create a visual count by displaying numbers through an LED screen</p> <p>To select appropriate inputs to introduce images/ text/ scrolling text</p> <p>To predict the behaviour of a program when a</p>	<p>To write and use simple procedures in order to construct images and geometric patterns using repeat commands.</p> <p>To use a repeat command to draw a square</p> <p>To alter variables to draw regular polygons.</p> <p>To use repeat commands to draw hypotrochoids.</p>	<p>To understand that computer systems are written using differing syntax</p> <p>To understand that python is a popular programming language (syntax)</p> <p>Children will begin to understand how coding can be typed and edited to create a working algorithm</p> <p>Children will learn that specific words/ symbols</p>	<p>This unit build upon syntax understanding by exploring CCS, HTML and Java Script.</p> <p>During this unit, children will learn how to build a simple search engine.</p> <p>Children will develop prior knowledge of databases, sorting information to increase optimism od result.</p> <p>Children to use simple HTML syntax alongside blocks of code to build and edit algorithms.</p>		<p>To understand and explain an event in an algorithm</p> <p>To use events to create key board commands that control one or more objects within a game</p> <p>To program directional command, including variable of degree turn and distance moved</p> <p>To explain bugs and discuss/ trail plausible solutions</p>	
	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							

	<p>and correct errors in algorithms and programs</p>	<p>variable is altered and test the outcome</p> <p>To select appropriate repeat functions (repeat/ looks/ forever loops) in order to create a desired effect within a program</p> <p>To select appropriate inputs to pause images for a given amount of time</p> <p>To begin to identify blocks of code written in syntax and suggest what the code may do</p>	 <p>To use functions to recreate a given image.</p> <p>To test out and debug commands within working algorithms.</p>	<p>create given outcomes</p> <p>Children will learn how to debug an algorithm by reading lines of code and checking for accuracy of input</p> <p>Children will learn how to input a range of variables and tools in order to build games and quizzes that fulfil a desired outcome.</p> <p>This unit covers: Printing to screen Calculation Inputs and variables Selection Using a timer Using a score board Loops If/ else statements</p>	<p>Children to compare taught syntax and decide which has the greatest range/ ease of use</p> <p>This unit covers: Inputs, including headings, text and images Adding links Vertebrate links across sites CCS- changing colours and backgrounds Formatting paragraphs Storing data on lists Programming text/ image search Adding a button in JavaScript Buttons and functions JQuery library</p>	<p>To create an 'If/else' statement in a program</p> <p>To use text commands to write instructions and reminders for players</p> <p>To time instructions/ reminders to appear at given points in a game</p> <p>To write complex code that includes if/ if/ else statements and forever loops</p> <p>To organise code into functions to make it easier to read</p> <p>To understand the outcomes of conditionals</p>
--	--	--	--	---	--	---

				Altering graphics Arrays Creating dice Sorting algorithms			To locate positions on an X and Y axis To program objects/ sprites to move to specified positions on an axis To present work to an audience using relevant software and key language
		Year 5			Year 6		
Key program		Autumn 2	Spring 2	Summer 2	Autumn 1	Spring 1& 2	
		Powerpoint or J2E Present	Adobe Express Advertising imovie	Adobe Express Infographics	Cyber Safe-LGFL A2- Web Technology Tutor	Adobe Express Webpages	
Information echnology/Digital Literacy	use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content	To use search engines to find relevant pictures based on a given topic To research a given topic using a search	To understand the concept of advertising To understand the role that social media plays in	To understand and explain the concept of advertising To understand that an infographic is	To understand how cyber criminals may advertise to potential victims through well placed advertising online	To understand that digital content is created to fitful a specific purpose	

	<p>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</p>	<p>engine and select sources based on validity</p> <p>To understand and explain the concept of search engine optimism</p> <p>To select the appropriate action to copy information:</p>	<p>influencing others to act</p> <p>To format a graphic advertisement for social media, based on a given target audience and desired outcome</p> <p>To use imovie on ipads to create a related video advertisement</p> <p>To import filmed footage into imovie</p> <p>To edit footage by cutting and trimming clips together</p> <p>To add transitions between clips where appropriate to</p>	<p>a summary of information</p> <p>To evaluate a range of infographics and decide which are the most effective and why</p> <p>To select appropriate text and imagery to communicate a message</p> <p>To understand the concepts of orientation, templates and placeholders and consider these when creating own infographic</p> <p>To edit/ alter an existing template in order to</p>	<p>To understand and explain why it is impossible to ensure that all information on the internet is true</p> <p>To appreciate the seriousness of misinformation and how this may impact daily life (using real world examples)</p>	<p>To compare and contrast similar websites to decide what makes a good website and what makes a bad website</p> <p>To recognise common features of similar web pages</p> <p>To understand the terms 'fair use' and 'copyright' and to understand how these terms are important when using online context</p> <p>To understand the terms user experience and user journey and employ these</p>	
	<p>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</p>	<p>using print screen/ snipping tools/ short hand keyboard command</p> <p>To insert and alter the layout of a slide in a deck</p> <p>To insert backgrounds from a given or found selection</p> <p>To format a text box, altering font, size and colour of text/ background</p>	<p>To use imovie on ipads to create a related video advertisement</p> <p>To import filmed footage into imovie</p> <p>To edit footage by cutting and trimming clips together</p> <p>To add transitions between clips where appropriate to</p>	<p>To understand the concepts of orientation, templates and placeholders and consider these when creating own infographic</p> <p>To edit/ alter an existing template in order to</p>	<p>To appreciate the seriousness of misinformation and how this may impact daily life (using real world examples)</p>	<p>To recognise common features of similar web pages</p> <p>To understand the terms 'fair use' and 'copyright' and to understand how these terms are important when using online context</p> <p>To understand the terms user experience and user journey and employ these</p>	

		<p>To insert word art into a presentation and manipulate the appearance through colour/ font/ size/ shape of text</p> <p>To select formatting choices for a given purpose, with audience in mind</p> <p>To add animation to a presentation, including appear/ disappear effects and sounds</p> <p>To navigate a toolbar effectively to find given commands</p>	<p>enhance flow of video</p> <p>To add text to emphasis advertisement</p> <p>To add sound which shows an understanding of audience and purpose</p> <p>To export video into a file</p> <p>To present media campaign to peers</p>	<p>display information</p> <p>To use the internet to conduct related searches</p> <p>To discern which information is necessary and valid for the purpose</p> <p>To consider target audience and infographic purpose during creation and justify design choice</p> <p>To present to peers and evaluate success of project</p>		<p>concepts when creating own website design</p> <p>To plan in the use of navigational tools, (headings/ buttons) to create clear pathways</p> <p>To understand what a button is; to hyperlink relevant information to main page using buttons</p> <p>To consider the implications of linking to content owned by other people and create hyperlinks on their own websites that link to other people's work</p>	
--	--	--	---	--	--	---	--

						To user test peers websites and evaluate user experience and ease of access	
E- safety	use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Autumn lessons: Spam email; plagiarism	Spring lessons: Secure passwords; fake images	Summer lessons: Consolidation of learning	Cyber Safe Module units include: Personal information Business data Cyber psychology Social engineering Malware Encryption Privacy Future technologies This unit is about cyber criminals. In this unit, children will explore the ways in which online technologies influence our daily lives; how we and others interact with online technologies;	Spring lessons: Online bullying; online friendships	Summer lessons: Online stereotypes

					the roles that others play in legal and illegal use of the internet (hackers) and what can be done to protect personal data.		
--	--	--	--	--	--	--	--