



# Knowledge and Progression in Computing

Personal, Social and Emotional Development	<b>Three to Four Year Olds</b>		Personal, Social and Emotional Development	<b>Reception</b>
	<ul style="list-style-type: none"> <li>Remember rules without needing an adult to remind them.</li> </ul>			<ul style="list-style-type: none"> <li>Show resilience and perseverance in the face of a challenge.</li> <li>Know and talk about the different factors that support their overall health and wellbeing:               <ul style="list-style-type: none"> <li>sensible amounts of 'screen time'.</li> </ul> </li> </ul>
Physical Development	<ul style="list-style-type: none"> <li>Match their developing physical skills to tasks and activities in the setting.</li> </ul>		Physical Development	<ul style="list-style-type: none"> <li>Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</li> </ul>
Understanding the World	<ul style="list-style-type: none"> <li>Explore how things work.</li> </ul>		Expressive Arts and Design	<ul style="list-style-type: none"> <li>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> </ul>
ELG- End of Reception Assessment	Personal, Social and Emotional Development	Managing Self	<ul style="list-style-type: none"> <li>Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</li> <li>Explain the reasons for rules, know right from wrong and try to behave accordingly.</li> </ul>	
	Expressive Arts and Design	Creating with Materials	<ul style="list-style-type: none"> <li>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> </ul>	

Year Group	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Topics</b>	E-Safety, Logging on and off, Using Bee bots, Coding using Purple Mash and Busy Things, Intro to Google Earth and digital maps, Hour of Code, Intro to Microsoft Word and Power point	E-Safety, Coding using Purple Mash, Busy Things & Scratch Jr, Using Bee bots, Using Google Earth and digital maps, Hour of Code, Using Microsoft Word and Power point	E Safety, Coding using Scratch & Kodu, Internet searches, Using Microsoft Power point, Word, Paint & Publisher, Garageband, Digital Photography & Stop Motion	E-Safety, Multi-media, Coding using Scratch, Branching databases, Presenting Info using Microsoft Power point, Word, Excel & Publisher, Exploring digital networks & search engines	E-safety, Coding using Scratch, Evaluating websites, Legobots, Presenting info using Microsoft Power point, Word, Excel & Publisher, Exploring digital networks	E-Safety, Coding using Scratch, J2Code, Khan Academy, Legobots, Designing and evaluating websites, Presenting research using Prezi, Microsoft Power point, Word, Excel & Publisher and Comic Life.

<p><b>Computers – Information Technology</b></p>	<p>Recognise common uses of information technology in the home and school environment</p>	<p>Recognise common uses of technology beyond school</p>	<p>Recognise familiar forms of input and output devices and how they are used, Make efficient use of familiar forms of input and output devices.</p>	<p>Use other input devices such as cameras or sensors</p>	<p>Consolidation</p>	<p>Consolidation</p>
<p><b>Key vocabulary</b></p>	<p>Computer, tablet, Beebot, Digital</p>	<p>Computer, tablet, Beebot, Digital</p>	<p>Computer, tablet, Beebot, Digital, Digital camera, sensor.</p>	<p>Computer, tablet, Beebot, Digital, Digital camera, sensor.</p>	<p>Computer, tablet, Beebot, Digital, Digital camera, sensor, Robot.</p>	<p>Computer, tablet, Beebot, Digital, Digital camera, sensor, Robot.</p>
<p><b>Using a computer – Information Technology</b></p>	<p>Use technology purposefully to create digital content</p>	<p>Use technology purposely to create, organise, store, manipulate and retrieve digital content</p>	<p>With support use a variety of software to accomplish goals</p>	<p>With support use a variety of software on a range of digital devices. With support select, sort and combine a variety of software on a range of digital devices to accomplish given goals</p>	<p>Independently select and use appropriate software for a task, Independently select , use and combine a variety of software to design and create content for a given audience</p>	<p>Independently select , use and combine a variety of software to design and create content for a given audience including colleting, analysing, evaluating and presenting data and information. Create a range of programs, systems and content for an audience.</p>
	<p>paint, colour, brush, tools, settings, undo, redo, text, image, size, poster, launch, application, software, window, minimise, restore, size, move, screen, close, click, drag,</p>	<p>paint, colour, brush, tools, settings, undo, redo, text, image, size, poster, launch, application, software, window, minimise, restore, size, move, screen, close, click, drag,</p>	<p>draw, object, shape, line, line colour, fill colour, group, ungroup, font, size, text box, format, image, wrap text, plan, link, image, object, link, hyperlink, minimise, restore, size, move, screen, split,</p>	<p>draw, object, shape, line, line colour, fill colour, group, ungroup, font, size, text box, format, image, wrap text, plan, link, image, object, link, hyperlink, minimise, restore, size, move, screen, split, create, organise, file, folder,</p>	<p>window, layout, text, font, colour, format, heading, hyperlink, 2D shape, 3D shape, orbit, pan, zoom, eraser, dimension, measurement, guide, audio, record, edit, play stop, skip, waveform, input, output, record, edit, play podcast, digital content,</p>	<p>window, layout, text, font, colour, format, heading, hyperlink, 2D shape, 3D shape, orbit, pan, zoom, eraser, dimension, measurement, guide, audio, record, edit, play stop, skip, waveform, input, output, record, edit, play podcast, digital content, downloadable, backing track,</p>

<b>Key vocabulary</b>	log on, log off, keyboards, keys, mouse, click, button, double click, drag, present.	log on, log off, keyboards, keys, mouse, click, button, double click, drag, present.	create, organise, file, folder, close, exit, search, print, password, screenshot, snipping tool, shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck, insert, table.	close, exit, search, print, password, screenshot, snipping tool, shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck, insert, table.	downloadable, backing track, voiceover, mute, gain, production, post-production, documentary, project, evaluation, screening, ceremony, upload, insert, table, spreadsheet, cell, row, column, formula/formulas, calculate, format, edit, insert, ascending, descending.	voiceover, mute, gain, production, post-production, documentary, project, evaluation, screening, ceremony, upload, insert, table, spreadsheet, cell, row, column, formula/formulas, calculate, format, edit, insert, ascending, descending.
<b>Networks - Digital Literacy</b>			Understand that computer networks enable the sharing of data and information. Understand that the internet is large network of computers and that information can be shared between computers	Understand what servers are and how they provide services to a network	Begin to use internet services to share and transfer data to a third party	Understand how computer networks enable computers to communicate and collaborate, Begin to use internet services within their creations and transfer data to a third party
<b>Key vocabulary</b>			Search engine, safe, secure, internet, world wide web, social media	Search engine, safe, secure, internet, world wide web, social media	Email, subject, address, communicate, advanced search, results, browser, terms of use, bias, authority, citation, plagiarism, source, website, https, site, domain, website, browser, address bar.	Email, subject, address, communicate, advanced search, results, browser, terms of use, bias, authority, citation, plagiarism, source, website, https, site, domain, website, browser, address bar.

<p><b>E-Safety – Digital Literacy</b></p>	<p>Learn where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p>	<p>Use technology safely and keep personal information private</p>	<p>Use technology safely and respectfully keeping personal information private. Recognise acceptable and unacceptable behaviour</p>	<p>Use technology responsibly and understand that communication online may be seen by others. Understand where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p>	<p>Understand the need to only select age appropriate content</p>	<p>Use technology respectfully and responsibly, Identify a range of ways to report concerns and content and contact in and out of school.</p>
<p><b>Key vocabulary</b></p>	<p>Safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet.</p>	<p>Safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet.</p>	<p>Internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public.</p>	<p>Internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public.</p>	<p>Spam, link, privacy, virus, scam, phishing, inbox, junk, sender, subject, secure, safe, account, online, private, social media, adverts, cyberbullying, reporting, anonymous, victim, fraudulent, policy, personal.</p>	<p>Spam, link, privacy, virus, scam, phishing, inbox, junk, sender, subject, secure, safe, account, online, private, social media, adverts, cyberbullying, reporting, anonymous, victim, fraudulent, policy, personal.</p>
<p><b>Net Searching - Digital Literacy</b></p>			<p>Use simple search technologies, Recognise that some sources are more reliable than others</p>	<p>Understand how results are selected and ranked by net engines</p>	<p>Use filters in search technologies effectively, appreciate how results are selected and ranked</p>	<p>Be discerning when evaluating digital content, Use filters in search technologies effectively</p>
<p><b>Key vocabulary</b></p>			<p>Search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media</p>	<p>Search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media</p>	<p>Advanced search, results, browser, terms of use, bias, authority, citation, plagiarism, source, website, https, site, domain, website, browser, address bar.</p>	<p>Advanced search, results, browser, terms of use, bias, authority, citation, plagiarism, source, website, https, site, domain, website, browser, address bar.</p>
	<p>Predict the behaviour of simple programs, Understand what algorithms are and how they are implemented on digital devices</p>	<p>Use logical reasoning to predict the behaviour of simple programs, Create simple programs, Create and debug simple programs,</p>	<p>Design, write and debug programs that control or simulate virtual events, Use logical reasoning to explain how simple algorithms work</p>	<p>Decompose programs into smaller parts, Use logical reasoning to detect and correct errors in algorithms and programs, Select, use and combine a variety of software systems and</p>	<p>Design, input and test an increasingly complex set of instructions to a program or device, Design, write and debug programs that accomplish specific goals including the control of simulating physical systems.</p>	<p>Include use of sequence, selection and repetition with the hardware used to explore real world systems. Solve problems by decomposing them into smaller parts. Create programs which use variables. Use variables, sequence,</p>

<p><b>Coding - Computer Science</b></p>		<p>Debug simple programs by using logical reasoning to predict the actions carried out by the code, understand that programs execute by following precise and unambiguous instructions</p>		<p>content that accomplish given goals</p>	<p>Design, write and test simple programs that follow a sequence of instructions or allow a set of instructions to be repeated. Design, write and test simple programs where a particular result will happen based on actions or situations controlled by the user. Use logical reasoning to explain how increasingly complex algorithms ensure a program's efficiency</p>	<p>selection and repetition in programs. Use logical reasoning to explain how increasingly complex algorithms work and to detect and correct errors in algorithms and programs efficiently.</p>
<p><b>Key vocabulary</b></p>	<p>Algorithm, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink.</p>	<p>Algorithm, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink.</p>	<p>Decompose, decomposing, logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable</p>	<p>Decompose, decomposing, logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable</p>	<p>Flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise.</p>	<p>Flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise.</p>