

# Computing Progression Document



GILES BROOK SCHOOL

Early Years		
	<p><b>Learning and Development:</b> The learning and development requirements are informed by the best available evidence on how children learn and reflect the broad range of skills, knowledge and attitudes children need as foundations for good future progress. EY providers must guide the development of children’s capabilities with a view to ensuring children complete the EYFS ready to benefit fully from the opportunities ahead of them. <b>(Stat Framework for EYFS Sept 2021)</b></p>	
	<p><b>Early Years Foundation Stage links from curriculum:</b>  <b>CLL:</b> engages actively in stories, non fiction; embeds new words in a range of contexts  <b>PSED:</b> set themselves simple goals; confidence in own abilities; persist at task and wait for turn/attention; co-operate and resolve conflict peacefully  <b>PD:</b> creating games and opportunities to play; fine motor control and precision; hand eye co-ordination; repeated and varied opportunities to explore and manipulate small tools’ practise proficiency, control and confidence  <b>L:</b> enjoy rhymes, poems and songs  <b>M:</b> count confidently; deep understanding; frequent opportunities to build and apply in different ways/with manipulatives; develop spatial awareness and reasoning; look for patterns; spot connections; have a go  <b>UtW:</b> listen to a broad selection of stories, non fiction, rhymes, poems; understanding of the technological world; build important knowledge; extend familiarity with words that support understanding across domains  <b>EAdD:</b> supporting imagination and creativity; wide range of media; engage with the arts; frequency, repetition and depth of experiences</p>	<p><b>EYFS</b>  <b>Early Learning Goals</b>  <b>CLL</b> - <i>make comments about what they have heard and ask questions to clarify understanding; offer explanations as to why things might happen</i>  <b>PSED</b> - <i>set and work towards simple goals; be confident to try new activity and show independence, resilience and perseverance; work and play co-operatively and take turns with others</i>  <b>PD</b> - <i>negotiate space and obstacles; use a range of small tools; begin to show accuracy and care when drawing</i>  <b>L</b> - <i>say a sound for each letter in the alphabet; write simple phrases that can be read by others</i>  <b>M</b> - <i>deep understanding of numbers to 10; subitise, real; compare quantity</i>  <b>UtW</b> - <i>talk about the lives of people around; describe environment using their knowledge from observation, stories, texts and maps; observe and draw plants and animals; understand and observe seasonal change</i>  <b>EAdD</b> - <i>safely explore a variety of materials tools and techniques; experiment with colour, design, texture, form and function, share creations explaining processes; sing a range of songs; perform songs</i></p>
	<b>Nursery (age 3-4)</b>	<b>Foundation (age 4-5)</b>
<b>Parts of the computer</b>	<p><b>Reinforce from home</b> Screen, headphones, microphone, computer, remote control, iPad, sound, power button, switch, charger, power switch, camera, lights  <b>New vocab</b> Keyboard, speakers, desktop, laptop, monitor, visualiser, mouse, mouse mat</p>	<p><b>Reinforce</b> Keyboard, speakers, desktop, laptop, monitor, visualiser, mouse, mouse mat  <b>New vocab</b> Cables, left click, right click, projector, power lead</p>

## Early Years

Nursery	Personal, Social and Emotional Development		<ul style="list-style-type: none"> <li>Increasingly follow rules, understanding why they are important.</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>
	Understanding the World		<ul style="list-style-type: none"> <li>Explore how things work.</li> </ul>
Reception	Personal, Social and Emotional Development		<ul style="list-style-type: none"> <li>Show resilience and perseverance in the face of a challenge.</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> <li>Know and talk about the different factors that support their overall health and wellbeing:-sensible amounts of 'screen time'.</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	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>

## Lower Phase

	Year 1	Year 2	Year 3
Algorithms	<ul style="list-style-type: none"> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> </ul> <p><b>We are treasure hunters - using programmable toys- Beebots</b>  <b>We are TV chefs - filming the steps of a recipe - iPads and tripods</b>  <b>We are collectors - finding images using the web - Kiddle and Google Slides</b></p>	<ul style="list-style-type: none"> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> </ul> <p><b>We are astronauts - programming on screen - Scratch/ ScratchJr</b>  <b>Beebots</b>  <b>We are game testers - exploring how computer games work - Scratch/ ScratchJr</b></p>	<ul style="list-style-type: none"> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p><b>We are programmers - programming an animation</b>  <b>We are bug fixers - finding and correcting bugs in programs</b></p>

	<ul style="list-style-type: none"> <li>• create and debug simple programs</li> </ul> <p><b>We are treasure hunters - using programmable toys</b></p> <ul style="list-style-type: none"> <li>• use logical reasoning to predict the behaviour of simple programs</li> </ul>	<ul style="list-style-type: none"> <li>• create and debug simple programs</li> </ul> <p><b>We are astronauts - programming on screen</b></p> <ul style="list-style-type: none"> <li>• use logical reasoning to predict the behaviour of simple programs</li> </ul> <p><b>We are astronauts - programming on screen</b></p> <p><b>We are game testers - exploring how computer games work</b></p>	<ul style="list-style-type: none"> <li>• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> </ul> <p><b>We are programmers - programming an animation</b></p> <ul style="list-style-type: none"> <li>• use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> </ul> <p><b>We are programmers - programming an animation</b></p> <p><b>We are bug fixers - finding and correcting bugs in programs</b></p> <p><b>We are presenters - videoing performance</b></p>
	<p><b>We are treasure hunters - using programmable toys</b></p> <p><b>We are TV chefs - filming the steps of a recipe</b></p>		
	<ul style="list-style-type: none"> <li>• use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p><b>We are TV chefs - filming the steps of a recipe</b></p> <p><b>We are painters - illustrating an ebook - 2Paint a picture</b></p> <p><b>We are collectors - finding images using the web</b></p> <p><b>We are storytellers - producing a talking book - 2 Create a story</b></p> <p><b>We are celebrating - creating a card digitally 2Paint a picture</b></p>	<ul style="list-style-type: none"> <li>• use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p><b>We are photographers - taking better photographs- iPads, Pixlr</b></p> <p><b>We are researchers - researching a topic - Google Drive, Kiddle</b></p> <p><b>We are detectives - collecting clues - internal Gmail</b></p> <p><b>We are zoologists - collecting data about bugs- 2Question</b></p>	<ul style="list-style-type: none"> <li>• 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</li> </ul> <p><b>We are programmers - programming an animation</b></p> <p><b>We are presenters - videoing performance</b></p> <p><b>We are vloggers - Making and sharing short screen cast presentation</b></p> <p><b>We are communicators - communicating safely on the internet</b></p> <p><b>We are opinion pollsters - collecting and analysing data</b></p>
			<ul style="list-style-type: none"> <li>• use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> </ul> <p><b>We are vloggers - Making and sharing short screen cast presentation</b></p>
	<ul style="list-style-type: none"> <li>• recognise common uses of information technology beyond school</li> </ul> <p><b>We are treasure hunters - using programmable toys</b></p> <p><b>We are TV chefs - filming the steps of a recipe</b></p> <p><b>We are painters - illustrating an ebook</b></p> <p><b>We are collectors - finding images using the web</b></p>	<ul style="list-style-type: none"> <li>• recognise common uses of information technology beyond school</li> </ul> <p><b>We are game testers - exploring how computer games work</b></p> <p><b>We are photographers - taking better photographs</b></p> <p><b>We are researchers - researching a topic</b></p> <p><b>We are detectives - collecting clues</b></p> <p><b>We are zoologists - collecting data about bugs</b></p>	<ul style="list-style-type: none"> <li>• 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</li> </ul> <p><b>We are vloggers - Making and sharing short screen cast presentation</b></p>

	<p><b>We are storytellers - producing a talking book</b>  <b>We are celebrating - creating a card digitally</b></p>		<p><b>We are communicators - communicating safely on the internet</b>  <b>We are opinion pollsters - collecting and analysing data</b></p>
	<ul style="list-style-type: none"> <li>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</li> </ul> <p><b>We are painters - illustrating an ebook</b>  <b>We are collectors - finding images using the web</b>  <b>We are celebrating - creating a card digitally</b>  <b>We are storytellers - producing a talking book</b></p>	<ul style="list-style-type: none"> <li>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</li> </ul> <p><b>We are game testers - exploring how computer games work</b>  <b>We are photographers - taking better photographs</b>  <b>We are researchers - researching a topic</b>  <b>We are detectives - collecting clues</b>  <b>We are zoologists - collecting data about bugs</b></p>	<ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p><b>We are presenters - videoing performance</b>  <b>We are vloggers - Making and sharing short screen cast presentation</b>  <b>We are communicators - communicating safely on the internet</b></p>
Parts of the computer	<p><b>Reinforce</b>  Screen, headphones, microphone, computer, remote control, iPad, sound, power button, switch, charger, power switch, camera, lights, keyboard, speakers, desktop, laptop, monitor, visualiser, mouse, mouse mat, cables, left click, right click, projector, power lead</p> <p><b>New vocab</b>  Home button, volume... home button</p>	<p><b>Reinforce</b>  Home button</p> <p><b>New vocab</b>  Tracker pad, PC, swipe up, left and right....</p>	<p><b>Reinforce</b>  Tracker pad, PC</p> <p><b>New vocab</b>  Charging trolley, Chrome books</p>
Online Safety	<p><b>Developing online safety guidelines</b>  <b>Social and emotional wellbeing and developing resilience</b>  <b>Responsible internet use</b>  <b>Keeping information safe</b>  <b>Digital citizenship</b>  <b>Playing games and having fun</b></p>		

## Upper Phase

	Year 4	Year 5	Year 6
Algorithms	<ul style="list-style-type: none"> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul>	<ul style="list-style-type: none"> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul>	<ul style="list-style-type: none"> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul>

	<p><b>We are software developers - developing a simple educational game</b></p> <p><b>We are toy designers - prototyping an interactive toy</b></p> <p><b>We are meteorologists - presenting the weather</b></p>	<p><b>We are game developers - developing an interactive game</b></p> <p><b>We are cryptographers - cracking codes</b></p> <p><b>We are artists - fusing geometry and art</b></p>	<p><b>We are adventure gamers - making a text based adventure game</b></p> <p><b>We are computational thinkers - Mastering algorithms for searching, sorting and mathematics</b></p>
	<ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> </ul> <p><b>We are software developers - developing a simple educational game</b></p> <p><b>We are toy designers - prototyping an interactive toy</b></p>	<ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> </ul> <p><b>We are game developers - developing an interactive game</b></p>	<ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> </ul> <p><b>We are adventure gamers - making a text based adventure game</b></p> <p><b>We are computational thinkers - Mastering algorithms for searching, sorting and mathematics</b></p>
	<ul style="list-style-type: none"> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> </ul> <p><b>We are software developers - developing a simple educational game</b></p> <p><b>We are toy designers - prototyping an interactive toy</b></p> <p><b>We are musicians - producing digital music</b></p> <p><b>We are meteorologists - presenting the weather</b></p>	<ul style="list-style-type: none"> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> </ul> <p><b>We are game developers - developing an interactive game</b></p> <p><b>We are artists - fusing geometry and art</b></p>	<ul style="list-style-type: none"> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> </ul> <p><b>We are adventure gamers - making a text based adventure game</b></p> <p><b>We are computational thinkers - Mastering algorithms for searching, sorting and mathematics</b></p>
	<ul style="list-style-type: none"> <li>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</li> </ul> <p><b>We are html editors - editing and writing html</b></p> <p><b>We are meteorologists - presenting the weather</b></p> <p><b>We are co-authors - producing a Wiki</b></p> <p><b>We are musicians - producing digital music</b></p>	<ul style="list-style-type: none"> <li>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</li> </ul> <p><b>We are game developers - developing an interactive game</b></p> <p><b>We are artists - fusing geometry and art</b></p> <p><b>We are web developers - creating a website about cyber safety</b></p> <p><b>We are bloggers - sharing experiences and opinions</b></p> <p><b>We are architects - creating a virtual space</b></p>	<ul style="list-style-type: none"> <li>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</li> </ul> <p><b>We are advertisers - creating a short television advert</b></p> <p><b>We are travel writers - using media and mapping to document a trip</b></p> <p><b>We are publishers - creating a year book or magazine</b></p>
	<ul style="list-style-type: none"> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> </ul> <p><b>We are co-authors - producing a Wiki</b></p>	<ul style="list-style-type: none"> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> </ul>	<ul style="list-style-type: none"> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> </ul>

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	<ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p><b>We are html editors - editing and writing html</b>  <b>We are co-authors - producing a Wiki</b>  <b>We are musicians - producing digital music</b></p>	<ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p><b>We are cryptographers - cracking codes</b>  <b>We are web developers - creating a website about cyber safety</b>  <b>We are bloggers - sharing experiences and opinions</b></p>	<ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul> <p><b>We are advertisers - creating a short television advert</b>  <b>We are network technicians - exploring computer networks including the internet</b>  <b>We are travel writers - using media and mapping to document a trip</b>  <b>We are publishers - creating a year book or magazine</b></p>
<b>Parts of the computer</b>	<p><b>Reinforce</b>  Charging trolley, Chrome books</p> <p><b>New vocab</b>  Tripod, green screen</p>	<p><b>Reinforce</b>  Tripod, green screen</p> <p><b>New vocab</b>  Jack, audio jack, lighting cable</p>	<p><b>Reinforce</b>  Jack, audio jack, lighting cable</p> <p><b>New vocab</b>  LAN (local area network) cable, VGA (video graphics array) cable, server, USB (universal serial bus)</p>
<b>Online safety</b>	<p><b>Developing online safety guidelines</b>  <b>Social and emotional wellbeing and developing resilience</b>  <b>Responsible internet use</b>  <b>Keeping information safe</b>  <b>Digital citizenship</b>  <b>Playing games and having fun</b></p>		

