



## Computing in Our School.

At Churchside Federation, we believe that technology is changing the lives of everyone. It's not only important for children to know how to effectively use technology, but also how to remain safe and secure whilst doing so. Technology permeates every facet of modern society, and not being computer literate is no longer a sustainable option for the children; it will be necessary for children to be computer literate not only for their future employment, but for leisure also. We are in an age where we are teaching children to prepare them for jobs which may not have even been invented yet, and so these skills are crucial for their development and future prospects.

Year Group	Knowledge	Skills	Golden Threads
<b>YR</b>			
<ul style="list-style-type: none"> <li><b>Understanding technology</b></li> </ul>	<ul style="list-style-type: none"> <li>To recognise a range of technology used in home and at school.</li> <li>To select and use technology for a particular purpose.</li> </ul>	<ul style="list-style-type: none"> <li>I can look for technology around the school.</li> <li>I can survey technology I have at home.</li> </ul>	<p><b><u>Technology at home</u></b> – what technology do I have at home?</p> <p>What technology do I use at home?</p>
<ul style="list-style-type: none"> <li><b>Programming</b></li> </ul>	<ul style="list-style-type: none"> <li>To complete a simple program.</li> </ul>	<ul style="list-style-type: none"> <li>I can explore simple programs with the Beebots.</li> </ul>	<p><b><u>Technology at school</u></b> – what is a computer?</p> <p>When do I use technology at school?</p>
<ul style="list-style-type: none"> <li><b>Digital Literacy</b></li> </ul>	<ul style="list-style-type: none"> <li>To teach and encourage children to click on different icons to cause things to happen in a computer program.</li> </ul>	<ul style="list-style-type: none"> <li>I can explore in class with the computers/IPads.</li> <li>I can use the CD player independently.</li> </ul>	<p>When do my teachers use technology?</p>
<ul style="list-style-type: none"> <li><b>E-Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>To use ICT hardware to interact with age appropriate computer software.</li> </ul>	<ul style="list-style-type: none"> <li>I can explore age appropriate apps on the iPad.</li> <li>I can read stories (such as “Clicking Chicken”) to introduce online safety).</li> <li>I can use technology safely and respectfully,</li> <li>I can identify where to go for help and support.</li> </ul>	<p><b><u>Staying safe</u></b> – what is the internet?</p> <p>How do you take care of your personal information?</p>
<b>Y1</b>			
<ul style="list-style-type: none"> <li><b>Understanding technology</b></li> </ul>	<ul style="list-style-type: none"> <li>To recognise and give examples of common uses of information technology they encounter in life.</li> </ul>	<ul style="list-style-type: none"> <li>I can talk about technology I might find in my home.</li> </ul>	<p><b><u>Technology at home</u></b> -what technology do I have at home?</p> <p>What technology do I use at</p>

<ul style="list-style-type: none"> <li>• <b>Programming</b></li> </ul>	<ul style="list-style-type: none"> <li>• To create, debug and implement instructions (simple algorithms) as programs.</li> <li>• To understand that digital devices follow precise instructions and simulate real situations</li> </ul>	<ul style="list-style-type: none"> <li>• I can give a set of instructions to a Beebot and correct any errors in instructions.</li> <li>• I can use logical reasoning to predict the behaviour of simple programs.</li> <li>• I can create and debug simple programs.</li> </ul>	<p>home?</p> <p>What technology do other people at home use?</p>
<ul style="list-style-type: none"> <li>• <b>Digital Literacy</b></li> </ul>	<ul style="list-style-type: none"> <li>• To create still and moving images with audio.</li> <li>• To present and communicate their learning to others in a variety of ways.</li> </ul>	<ul style="list-style-type: none"> <li>• I can use Purple Mash to design own stories with moving images and audio, saving and retrieving.</li> <li>• I can use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> </ul>	<p><b>Technology at school</b> – how do people use computers at work?</p> <p>How can you make art on a computer?</p>
<ul style="list-style-type: none"> <li>• <b>E-Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>• To understand that information about themselves may be personal and they can choose who to share it with.</li> <li>• To explain what it means to stay safe online.</li> <li>• To begin to develop strategies for managing concerns about online content, seeking help and support where needed.</li> </ul>	<ul style="list-style-type: none"> <li>• I can read stories (such as “Clicking Chicken”) to introduce online safety.</li> <li>• I can use technology safely and respectfully, keeping personal information private.</li> <li>• I can identify where to go for help and support when I have a concern.</li> </ul>	<p><b>Staying safe</b> – how can you use the internet?</p> <p>How do you take care of your personal information?</p>
<b>Y2</b>			
<ul style="list-style-type: none"> <li>• <b>Understanding technology</b></li> </ul>	<ul style="list-style-type: none"> <li>• To recognise common uses of information technology beyond school, including those which they don’t frequently encounter in their daily routine.</li> </ul>	<ul style="list-style-type: none"> <li>• I can look for technology within our village (e.g. going to the shop, what do I see, hear? In the shop, on the roads and paths).</li> <li>• I can recognise common uses of information technology beyond school.</li> </ul>	<p><b>Technology at home</b> - how do computer games work?</p>
<ul style="list-style-type: none"> <li>• <b>Programming</b></li> </ul>	<ul style="list-style-type: none"> <li>• To understand computers are not intelligent but can appear to be when following algorithms.</li> <li>• To understand that algorithms are implemented as programs on digital devices.</li> <li>• To create and debug programs to achieve specific goals.</li> <li>• To use the principles of logical reasoning to plan and predict the behaviour of simple programs.</li> </ul>	<ul style="list-style-type: none"> <li>• I can use the Beebots to follow specific instructions, predict what the Beebot needs to do before programming it</li> <li>• I can use logical reasoning to predict the behaviour of simple programs.</li> <li>• I can create and debug simple programs.</li> <li>• I can understand what algorithms are, how they are implemented as programs, and that programs follow precise instructions.</li> </ul>	<p><b>Technology at school</b> – how can computers help you learn?</p> <p>How can you write a story on a computer?</p>

<ul style="list-style-type: none"> <li>• <b>Digital Literacy</b></li> </ul>	<ul style="list-style-type: none"> <li>• To solve real and imaginary problems on and off screen.</li> <li>• To create still and moving images including audio and text.</li> <li>• To collect data (numerical, research facts) which they are able to retrieve, store and manipulate.</li> </ul>	<ul style="list-style-type: none"> <li>• I can record data in a table using Microsoft Word.</li> <li>• I can use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> </ul>	<p><b>Staying safe</b> – how can you use the web safely?</p> <p>How do you take care of your personal information?</p>
<ul style="list-style-type: none"> <li>• <b>E-Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>• To manage online activity safely, recognising which information should be kept private.</li> <li>• To identify some of the potential risks associated with the online world.</li> <li>• To communicate safely and respectfully using a range of digital devices.</li> <li>• To develop strategies for managing concerns about online content, seeking help and support when needed.</li> </ul>	<ul style="list-style-type: none"> <li>• I can read stories (such as “Clicking Chicken”) to introduce online safety).</li> <li>• I can use technology safely and respectfully, keeping personal information private.</li> <li>• I can identify where to go for help and support when I have a concern about content or contact.</li> </ul>	
<b>Y3</b>			
<ul style="list-style-type: none"> <li>• <b>Understanding technology</b></li> </ul>	<ul style="list-style-type: none"> <li>• To understand that computers generally accept inputs and produce outputs.</li> <li>• To develop a basic understanding of how computers can be linked to form a local network, such as those found in schools.</li> <li>• To be aware of some of the services offered by the internet and can describe when they are, and are not, using online technologies.</li> </ul>	<ul style="list-style-type: none"> <li>• I can learn how to save and access work on a shared drive.</li> <li>• I can use logical reasoning to explain how a simple algorithm works.</li> <li>• I can understand computer networks and how they can provide multiple services.</li> <li>• I can understand the opportunities they offer for communication and collaboration.</li> </ul>	<p><b>Technology at home</b> – how do computer games work?</p>
<ul style="list-style-type: none"> <li>• <b>Programming</b></li> </ul>	<ul style="list-style-type: none"> <li>• To create programs to accomplish specific goals (e.g. digital devices, changing instructions, logical reasoning).</li> <li>• To be confident and creative users of technology.</li> </ul>	<ul style="list-style-type: none"> <li>• I can design programs that accomplish specific goals, including controlling or simulating physical systems.</li> <li>• I can solve problems by decomposing programs into smaller parts.</li> </ul>	<p><b>Technology at school</b> – how does animation work?</p> <p>How do you make video on a computer?</p>
<ul style="list-style-type: none"> <li>• <b>Digital Literacy</b></li> </ul>	<ul style="list-style-type: none"> <li>• To begin to make informed choices about appropriateness of digital content.</li> <li>• To become more discerning in their choice of search technology to accomplish specific goals.</li> </ul>	<ul style="list-style-type: none"> <li>• I can research online using specific websites to answer questions.</li> <li>• I can present information using PowerPoint.</li> <li>• I can select, use and combine a variety of software.</li> <li>• I can design and create a program that accomplishes given goals, including collecting, analysing, evaluating and presenting information.</li> </ul>	<p><b>Staying safe</b> – what is the world wide web?</p> <p>What are different ways to communicate online?</p>

<ul style="list-style-type: none"> <li>• <b>E-Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>• To review their online activity, ensuring they do not inadvertently reveal personal details.</li> <li>• To show respect for content created by others, respecting privacy.</li> <li>• To discriminate about what they share.</li> <li>• To identify a range of potential online risks.</li> <li>• To exercise caution when receiving attachments and web links.</li> </ul>	<ul style="list-style-type: none"> <li>• I can use technology safely and respectfully.</li> <li>• I can recognise acceptable/unacceptable behaviour.</li> <li>• I can identify how to report concerns about content or contact.</li> <li>• I can use search technologies.</li> </ul>	
<b>Y4</b>			
<ul style="list-style-type: none"> <li>• <b>Understanding technology</b></li> </ul>	<ul style="list-style-type: none"> <li>• To understand the role of the web browser when viewing web pages, and to explain how individual web pages can be found.</li> <li>• To recognise there is a difference between the internet and the World Wide Web.</li> <li>• To recognise and describe some of the services offered by the internet.</li> </ul>	<ul style="list-style-type: none"> <li>• I can complete research for our theme online.</li> <li>• I can use logical reasoning to explain how a simple algorithm works.</li> <li>• I can understand computer networks, including the internet, how they can provide multiple services.</li> <li>• I can understand the opportunities they offer for communication and collaboration.</li> </ul>	<p><b>Technology at home</b> – how do computer games work?</p>
<ul style="list-style-type: none"> <li>• <b>Programming</b></li> </ul>	<ul style="list-style-type: none"> <li>• To create and debug programs.</li> <li>• To use sequence and repetition, refine algorithms and control/stimulate physical systems.</li> </ul>	<ul style="list-style-type: none"> <li>• I can design programs that accomplish specific goals, including controlling or simulating physical systems.</li> <li>• I can solve problems by decomposing programs into smaller parts.</li> </ul>	<p><b>Technology at school</b> – what is computer science?</p> <p>What is an algorithm?</p>
<ul style="list-style-type: none"> <li>• <b>Digital Literacy</b></li> </ul>	<ul style="list-style-type: none"> <li>• To identify, collect and manipulate different types of data, which they present as information.</li> <li>• To choose keywords carefully when conducting searches.</li> </ul>	<ul style="list-style-type: none"> <li>• I can present data in Excel.</li> <li>• I can select, use and combine a variety of software.</li> <li>• I can design and create a program that accomplishes given goals, including collecting, analysing, evaluating and presenting information.</li> </ul>	<p><b>Staying safe</b> – what is the world wide web?</p> <p>What are different ways to communicate online?</p>
<ul style="list-style-type: none"> <li>• <b>E-Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>• To review online activity, not revealing personal details.</li> <li>• To respect content created by others.</li> <li>• To discriminate what they share and whether they need permission.</li> <li>• To identify a range of online risks.</li> <li>• To exercise caution when receiving web links and attachments.</li> </ul>	<ul style="list-style-type: none"> <li>• I can use technology safely and respectfully.</li> <li>• I can recognise acceptable/unacceptable behaviour.</li> <li>• I can identify how to report concerns about content or contact.</li> <li>• I can use search technologies.</li> </ul>	
<b>Y5</b>			

<ul style="list-style-type: none"> <li>• <b>Understanding technology</b></li> </ul>	<ul style="list-style-type: none"> <li>• To understand and explain how computer networks work, and know the internet is a collection of computers connected together.</li> <li>• To understand that the World Wide Web is just one of the services offered by the Internet (as well as email and VoIP services such as Skype).</li> </ul>	<ul style="list-style-type: none"> <li>• I can design and use my own PowerPoint presentation.</li> <li>• I can use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs.</li> <li>• I can understand computer networks, including the internet, how they can provide multiple services.</li> <li>• I can understand the opportunities they offer for communication and collaboration.</li> </ul>	<p><b>Technology at home</b> – what makes a good computer game?</p> <p>How do you design a good character?</p>
<ul style="list-style-type: none"> <li>• <b>Programming</b></li> </ul>	<ul style="list-style-type: none"> <li>• To create, deconstruct and refine programs to accomplish specific goals.</li> <li>• To use logical reasoning to explain how algorithms work.</li> <li>• To independently employ strategies to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>• I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</li> <li>• I can solve problems by decomposing programs into smaller parts.</li> </ul>	<p><b>Technology at school!</b> – how do we get computers to do what we want?</p> <p>What is debugging?</p>
<ul style="list-style-type: none"> <li>• <b>Digital Literacy</b></li> </ul>	<ul style="list-style-type: none"> <li>• To be confident, capable and creative users of technology, selecting and using digital resources for purpose and effect.</li> <li>• To identify, collect and analyse different types of data, which they manipulate and re-present as information for a variety of audiences and purposes.</li> <li>• To use search technologies effectively and respond to enquiries to support their learning.</li> </ul>	<ul style="list-style-type: none"> <li>• I can use Excel to present data.</li> <li>• I can use a search engine to research for our theme.</li> <li>• I can select, use and combine a variety of software (including internet services).</li> <li>• I can design and create a range of programs and systems that accomplish given goals, including collecting, analysing, evaluating and presenting information.</li> </ul>	<p><b>Staying safe</b> – how does the internet work?</p> <p>Should I trust everything I read on the web?</p>
<ul style="list-style-type: none"> <li>• <b>E-Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>• To continue to maintain, review and amend online identities.</li> <li>• To communicate in a variety of ways.</li> <li>• To engage in a range of online communities safely and respectfully, with friends.</li> <li>• To use safety and security settings on a range of digital devices, with adult support.</li> <li>• To recognise a range of online risks.</li> </ul>	<ul style="list-style-type: none"> <li>• I can use technology safely, respectfully and responsibly.</li> <li>• I can recognise acceptable/unacceptable behaviour.</li> <li>• I can identify a range of ways to report concerns about content or contact.</li> <li>• I can use search technologies effectively.</li> </ul>	
<b>Y6</b>			
<ul style="list-style-type: none"> <li>• <b>Understanding technology</b></li> </ul>	<ul style="list-style-type: none"> <li>• To understand how data travels across networks in packets and how these can be broken up and reconstructed.</li> <li>• To appreciate how search results are ranked, including an understanding of</li> </ul>	<ul style="list-style-type: none"> <li>• I can use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in</li> </ul>	<p><b>Technology at home</b> – what makes a good computer game?</p>

	'relevance' and 'importance' in finding and presenting results.	<p>algorithms and programs.</p> <ul style="list-style-type: none"> <li>I can understand computer networks, including the internet, how they can provide multiple services.</li> <li>I can understand the opportunities they offer for communication and collaboration.</li> </ul>	How do you design a good character?
<ul style="list-style-type: none"> <li><b>Programming</b></li> </ul>	<ul style="list-style-type: none"> <li>To deconstruct, improve and create programs including variables, logical reasoning and challenge.</li> <li>To explain why they have structured algorithms as they have and describe the effect this has on a program.</li> </ul>	<ul style="list-style-type: none"> <li>I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</li> <li>I can solve problems by decomposing programs into smaller parts.</li> </ul>	<p><b>Technology at school</b> – how do search engines work?</p> <p>How do computer programs use variables?</p>
<ul style="list-style-type: none"> <li><b>Digital Literacy</b></li> </ul>	<ul style="list-style-type: none"> <li>To create programs, systems and digital content, thinking carefully about aesthetics, functionality and impact.</li> <li>To be discerning in evaluating digital content.</li> <li>To use search technologies effectively to respond to enquiries and support their learning.</li> </ul>	<ul style="list-style-type: none"> <li>I can select, use and combine a variety of software (including internet services).</li> <li>I can design and create a range of programs and systems that accomplish given goals, including collecting, analysing, evaluating and presenting information.</li> </ul>	<p><b>Staying safe</b> – how does the internet work?</p> <p>Should I trust everything I read on the web?</p>
<ul style="list-style-type: none"> <li><b>E-Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>To continue to maintain, review and amend online identities, considering impact of potential digital footprint.</li> <li>To communicate in a wide variety of ways and pay careful attention to details might be inadvertently revealed.</li> <li>To engage in an increasing range of online communities safely and respectfully, with friends and the wider online community.</li> <li>To actively consider and use the safety and security settings on a range of digital devices, with adult support.</li> <li>To check the validity of data and show respect to privacy and copyright when using online resources.</li> <li>To recognise a range of potential online risks, including appropriate content, and can identify ways of seeking support and reporting concerns.</li> </ul>	<ul style="list-style-type: none"> <li>I can use technology safely, respectfully and responsibly.</li> <li>I can recognise acceptable/unacceptable behaviour.</li> <li>I can identify a range of ways to report concerns about content or contact.</li> <li>I can use search technologies effectively.</li> </ul>	