



# Belmont School's Knowledge and skill progression map: Computing

Year Group	Knowledge (Know)	Skills (do)	Concepts (understand)
<b>EYFS</b>	<p>Know where the computing room is in my school</p> <ul style="list-style-type: none"> <li>• Know the name of key accessories which make up a computer.</li> <li>• Know the difference between computers, laptop and tablets and how these are all part of technology</li> <li>• Know that a range of technology is used in places such as homes and schools.</li> <li>• Know that technology is used for particular purposes</li> <li>• Know where the on/off button is located on the tower and on the screen</li> <li>• Know that a keyboard allows us to make letters and word on the computer screen</li> <li>• Know how to use a mouse to navigate around a desktop</li> <li>• Log into the computer using their personal log in and password</li> <li>• Know where to find their logins for the school's online platform and to recognise the logo i.e. Google work space</li> <li>• Know that a keyboard has every letter in the</li> </ul>	<ul style="list-style-type: none"> <li>• Independently turn on the computer using the on/off switch on the tower</li> <li>• Control the cursor on the screen and use left click when selecting a tool</li> <li>• Use the cursor to select a simple programme (e.g. 2paint)</li> <li>• Use a simple programme with the mouse (drawing on 2paint)</li> <li>• Use the keyboard to write simple words using touch type related to one of their traditional stories</li> <li>• Become familiar with Google Workspace and practise logging in using their username and password – knowing this should be kept confidential</li> <li>• Creating simple codes using beebots.</li> <li>• Controlling remote toys (e.g. remote control cars) and understanding the left, right, forward and back buttons will move the toy in those directions.</li> </ul>	<p>Technology</p> <ul style="list-style-type: none"> <li>• Curser</li> <li>• Controls</li> <li>• Username and password</li> <li>• Log on/off</li> <li>• Internet Safety</li> <li>• Hardware</li> <li>• Mouse</li> <li>• Monitor</li> <li>• Screen</li> <li>• Keyboard</li> </ul>

	<p>alphabet</p> <ul style="list-style-type: none"> <li>• Know that the internet is not always safe</li> <li>• Know that there are things you can do if you feel unsafe on a computer</li> <li>• Know to keep my username, passwords and personal information confidential.</li> <li>• To know how to answer basic questions about information displayed in images e.g. more or less.</li> <li>• To know how to follow simple instructions to control a digital device and how to input a short sequence of instructions to control a device.</li> </ul>	<ul style="list-style-type: none"> <li>• Select and use technology for particular purposes</li> <li>• Be able to log on and log off the computer using their simplified usernames and passwords</li> <li>• Use the curser to select a simple program and use correct movement</li> <li>• Input left, right, forward, backward controls by using the button on a beebot.</li> <li>• Use single finger touch type to create basic words using the keyboard</li> <li>• Log in to school’s online platform using their username and password</li> </ul>	
<b>Year 1</b>	<p>Know how to login using their school’s online platform username and password</p> <ul style="list-style-type: none"> <li>• Know that there are different forms of communication (email)</li> <li>• Know you should only open email from a known source.</li> <li>• Know in what ways the internet can be unsafe</li> <li>• Know and recognise common uses of information technology beyond school</li> <li>• Know where to find their homework and spellings using Google Workspace</li> <li>• To know where the letters are on the keyboard and begin typing their name</li> <li>• To know how to use 2simple programme to type words and sentences using the keyboard.</li> <li>• To know that when a computer is doing something, it is following instructions called ‘code’</li> <li>• Know how to input left, right forward, backward controls into a beebot</li> </ul>	<p>Show an awareness of a range of devices and tools that they encounter on a daily basis</p> <ul style="list-style-type: none"> <li>• To use a range of simple tools in a paint package</li> <li>• To control a beebot using left and right</li> <li>• To put 2 instructions together to control a beebot</li> <li>• To begin to plan and test a beebot journey</li> <li>• To use the spacebar, backspace, enter and arrow keys on a keyboard</li> <li>• To be able to word process ideas using a keyboard</li> <li>• To begin to observe different forms of information</li> <li>• To login using their school’s online platform username and password</li> <li>• To send emails to their peers on school’s online platform</li> <li>• Be able to access their Google Workspace using the log in and password</li> <li>• Begin to use Google Workspace and become familiar</li> </ul>	<p>Understand the keyboard is not in alphabetical order.</p> <ul style="list-style-type: none"> <li>• Software tools</li> <li>• Function of a keyboard</li> <li>• Range of information – newspaper, internet etc.</li> <li>• Email</li> <li>• Virtual stranger danger</li> <li>• Saving work</li> </ul>

	<ul style="list-style-type: none"> <li>• To know that we control computers by giving them instructions</li> <li>• To know that the order of instructions in an algorithm is important.</li> <li>• To know how to debug an error in a simple algorithm or program.</li> <li>• Know how to input left, right forward, backward controls into a beebot</li> <li>• Know who to tell if concerned about content or contact online.</li> <li>• To know how to open key applications independently and know how to save some work.</li> </ul>	<p>with their virtual classroom.</p> <ul style="list-style-type: none"> <li>• To independently control the mouse to select desired programmes.</li> <li>• To use 2simple to draw a picture of their house.</li> <li>• Show an awareness of different forms of information</li> </ul>	
<b>Year 2</b>	<p>Know the difference between email and communication systems such as blogs and wikis.</p> <ul style="list-style-type: none"> <li>• Know that the computers can be linked to share resources</li> <li>• Know what an algorithm is and to be able to predict the outcome of a simple programme</li> <li>• Know to keep personal information private (E-safety) and know who to tell if a problem occurs</li> <li>• Know that some people can hide their identity on the internet and they might not be trustworthy</li> <li>• Know how to recognise advertising on websites and learn to ignore it.</li> <li>• Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</li> <li>• Know what information technology is in a context and where have we seen it in the real world</li> <li>• Know how technology improves our world</li> <li>• Using IT responsibly when researching a topic</li> </ul>	<p>Controlling a mouse, keyboard and touchscreen device</p> <ul style="list-style-type: none"> <li>• Show an awareness of a range of inputs to a computer (IWB, mouse, touchscreen, microphone and keyboard)</li> <li>• Manipulate content by editing files, renaming etc.</li> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>• To be able to experiment with text, pictures and animation to make a simple slide show</li> <li>• To use the shape tools to draw.</li> <li>• Organise content when storing and saving</li> <li>• To begin to retrieve and save digital content</li> <li>• To make decisions to give precise instructions to a beebot using left, right, forward and backwards</li> <li>• To write a simple program, debug and test it.</li> <li>• To be able to use logical reasoning to predict what the outcome of a simple program will be.</li> <li>• To predict the outcome of the instructions they have given to a beebot</li> </ul>	<p>Storing, saving and retrieving work</p> <ul style="list-style-type: none"> <li>• Giving precise instructions</li> <li>• Algorithms,</li> <li>• Logic,</li> <li>• Debug,</li> <li>• Programme,</li> <li>• Devices</li> <li>• Respect</li> <li>• Kindness</li> </ul>

	<ul style="list-style-type: none"> <li>• Know I can extract information from the internet</li> <li>• To know what makes a good photograph</li> <li>• Know how to use a tool to achieve a desired effect</li> <li>• To know that when a computer is doing something, it is following instructions called 'code'</li> <li>• Know and recognise which photos have been changed</li> <li>• To know that there are different forms of digital content, i.e. text, image, video and audio</li> <li>• To know that we can use different types of media to convey information, e.g. text, image, audio, video</li> <li>• To know how to capture media with support (e.g. take photos, record audio).</li> </ul>	<ul style="list-style-type: none"> <li>• Keep their school's online platform passwords safe and to tell their teacher if a problem occurs</li> <li>• Use technology safely and respectfully, keeping personal information private</li> <li>• Demonstrate safe usage of IT and know who to contact if a problem arises</li> <li>• Independently program a bee bot with instructions to move as desired</li> <li>• Identify their errors in a code and debug these successfully using trial and error</li> <li>• To use a digital device to take a photograph</li> <li>• Explore the effect that light has on a photo</li> </ul>	
<b>Year 3</b>	<p>Know that we can retrieve information from online sources</p> <ul style="list-style-type: none"> <li>• Know why people may publish content that is not accurate</li> <li>• Know that some websites and/or pop-ups have commercial interests that may affect the way the information is presented.</li> <li>• Know that some internet content is inappropriate/illegal/unsafe and if viewed, should be reported to an adult</li> <li>• Know that it is unsafe to arrange to meet unknown people online.</li> <li>• Know that any communication received on the internet which makes you feel uncomfortable in any way must be reported to a trusted adult</li> <li>• Know what debugging means</li> <li>• Know how to print a document</li> </ul>	<p>Position their hands on the keyboard correctly and where the space bar, shift and caps-lock keys are and how to use them</p> <ul style="list-style-type: none"> <li>• Typing with uppercase and lowercase using all aspects of the keyboard</li> <li>• To use the mouse and highlight correctly</li> <li>• Saving their work regularly in an appropriate folder</li> <li>• Retrieve relevant images and information from online sources</li> <li>• Observe safe and unsafe websites and report unsafe sites to an adult</li> <li>• Understand the need to be critical evaluators of content</li> <li>• To draw a square, rectangle and other regular shapes on screen, using commands. To be able to write more complex programs.</li> <li>• Create simple sequences and debug them successfully</li> </ul>	<p>Typing efficiency</p> <ul style="list-style-type: none"> <li>• URLs</li> <li>• Appropriate use of the internet</li> <li>• Debugging</li> <li>• Sequencing</li> <li>• Password protection</li> </ul>

	<ul style="list-style-type: none"> <li>• Know how to change text formatting such as font, size, colour, bold, italics and underlined</li> <li>• Know how to manipulate text so it corresponds visually with what it says</li> <li>• Know where the shift key is and how to capitalise letters and type symbols on a document</li> <li>• Know where to find Office programmes</li> <li>• Know why we have strong passwords and manage them so that they remain confidential</li> <li>• Know that they must follow a set of instructions accurately for a code to be successful</li> <li>• Know that users can develop their own programs, and can demonstrate this by creating a simple program in an environment that does not rely on text</li> </ul>	<ul style="list-style-type: none"> <li>• Create strong passwords and manage or change them so that they remain strong.</li> <li>• To make objects perform different actions when keys are pressed on the keyboard</li> <li>• To know how to write a code that makes objects move around the screen when keys are pressed</li> <li>• Debug their codes independently when an error arises</li> <li>• Be able to place their hands correctly on a QWERTY keyboard using the home keys</li> <li>• Be able to touch type to increase their speed</li> </ul>	
<b>Year 4</b>	<p>Know that some people on the internet may behave maliciously (including cyber bullying)</p> <ul style="list-style-type: none"> <li>• Know how to recognise malicious behaviour</li> <li>• Know how to respond to malicious behaviour on the internet by reporting to an adult, website, IS provider, police, childline, CEOP</li> <li>• Know which websites are safe to do searches on</li> <li>• Know how to make graphic models</li> <li>• Know how to use algorithms for coding and programming</li> <li>• Know how to develop databases and sort the data according to different criteria.</li> <li>• Know and identify a range of programmes on the desktop and choose the appropriate one during a lesson</li> <li>• Know how to use the internet safely and securely by</li> </ul>	<p>Organise information on a document differently depending on their audience.</p> <ul style="list-style-type: none"> <li>• Manipulate and make changes to text such as fonts and colour.</li> <li>• Retrieve reliable images and information from online sources.</li> <li>• To download images from the camera into files on the computer. To be able to copy graphics from a range of sources and paste into a desktop publishing program.</li> <li>• Differentiate between safe and unsafe websites.</li> <li>• Report unsafe sites or content to an adult.</li> <li>• Search using Google safely (using 'for kids')</li> <li>• Copy from a range of sources and paste into a publishing program</li> </ul>	<p>Malicious behaviour</p> <ul style="list-style-type: none"> <li>• Cyber bullying</li> <li>• Adapting content to an audience</li> <li>• Search engine</li> <li>• Sorting data</li> </ul>

	<p>keeping their personal details confidential and reporting any suspicious online activity</p> <ul style="list-style-type: none"> <li>• To know that anything I share online will stay there to be seen and used by others</li> <li>• To know and give examples of inputs used</li> <li>• To know and give examples of outputs used</li> <li>• To know there is a difference between the Internet and the World Wide Web</li> <li>• To begin to know how to check who owns photos, text and clipart.</li> <li>• To know what an app or application is</li> <li>• To know some examples of search technology</li> <li>• To know how to design and create digital content for a specific purpose, e.g. poster, animation.</li> <li>• To know how to edit digital content to improve it</li> </ul>	<ul style="list-style-type: none"> <li>• Repeat instructions to draw regular shapes on screen.</li> <li>• Write and create programs/algorithms and predict their outcome.</li> <li>• Input data into databases and sort them according to different criteria.</li> <li>• Save documents regularly throughout the time they are working on them.</li> <li>• Save documents independently and successfully, being able to reopen and edit the document at a later date</li> <li>• Print completed work.</li> <li>• Access home learning and complete work given remotely</li> <li>• Touch type effectively to ensure faster and more accurate typing</li> </ul>	
<p><b>Year 5</b></p>	<p>Know that there are other ways to search for information (ex: search engines) and retrieve information from these</p> <ul style="list-style-type: none"> <li>• Know what a spreadsheet is and how to create one using Excel</li> <li>• Know that spreadsheets require formulas that ends in a result which can be transferred to a graph</li> <li>• Know that complex algorithms can have multiple errors that need debugging</li> <li>• To know how to read a complex program</li> <li>• To know how a particular algorithm works</li> <li>• To know how to detect (using logical reasoning) a bug and debug that problem in a program</li> <li>• To know a range of inputs and outputs that control or simulates control of a physical system</li> </ul>	<p>Use a variety of multimedia software to present information e.g. word, PowerPoint, moviemaker</p> <ul style="list-style-type: none"> <li>• To be able to combine sequences of instructions and procedures to turn devices on or off.</li> <li>• To understand input and output.</li> <li>• To be able to use an ICT program to control an external device that is electrical and/or mechanical.</li> <li>• To use ICT to measure sound or light or temperature using sensors.</li> <li>• To be able to produce and upload a podcast</li> <li>• Create effective posters, booklets or PowerPoints that are appropriate for the age related audience</li> <li>• Use key words and phrases when searching information on a search engine</li> <li>• Use search technologies effectively, appreciate how</li> </ul>	<p>Visual presenting techniques</p> <ul style="list-style-type: none"> <li>• Key word searches</li> <li>• Formula</li> </ul>

	<ul style="list-style-type: none"> <li>• To know some of the other services besides the web provided by the Internet</li> <li>• To begin to know how search results are ranked</li> <li>• To begin to know which resources on the Internet I can download and use</li> <li>• know the Be Smart e-safety rules</li> <li>• know things I can share and things I should not share and explain the reasons</li> <li>• know the risks about who and who not to contact online</li> <li>• To know how to take a picture and video for a purpose.</li> <li>• To know the success criteria for creating digital content for a given purpose and audience.</li> <li>• To know how to edit a range of existing and their own media to create content.</li> <li>• To know how to evaluate their own content against success criteria and make improvements accordingly</li> </ul>	<p>results are selected and ranked, and be discerning in evaluating digital content</p> <ul style="list-style-type: none"> <li>• Begin to input data and formulas into a spreadsheet</li> <li>• Detect and correct errors in complex algorithms</li> </ul>	
<b>Year 6</b>	<p>Know the most effective way to present information depending on the topic (data, fact file)</p> <ul style="list-style-type: none"> <li>• Know that search engines can provide us with efficient information in order of relevance</li> <li>• Know and understand what a computer network is including the internet – how they provide services and opportunities for communication and collaboration</li> <li>• Know that the internet provides engaging ways to revise topics in other areas of the curriculum</li> <li>• Know how their digital footprint can be shown on social media (podcasts, YouTube, WhatsApp)</li> </ul>	<p>Create a sophisticated multimedia presentation</p> <ul style="list-style-type: none"> <li>• To present a film for a specific audience and then adapt same film for a different audience.</li> <li>• Use logical reasoning to explain how a simple algorithm works and detect/correct errors in algorithms and programs</li> <li>• Detect algorithms in the outside world (traffic lights)</li> <li>• To use an ICT program to control a number of events for an external device.</li> <li>• To be able to use ICT to measure sound, light or temperature using sensors and interpret the data.</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding how to use technology safely, respectfully and responsibly- recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content or contact Problems around complex algorithm</li> <li>• Digital footprint</li> <li>• Phishing, scams and target advertising</li> </ul>

	<ul style="list-style-type: none"><li>• Know that managing settings on social media apps can help with privacy and keep you safe</li><li>• Know a range of ways to report concerns online or on social media</li><li>• To know not to publish other people’s pictures or tag them on the internet without permission.</li><li>• To know how to design and create a more complex algorithm (including with pencil and paper)</li><li>• To begin to know how data travels across networks in packets</li><li>• To know how data is broken up into packets and reconstructed when we receive it</li><li>• To know that websites can use my data to make money and target their advertising</li><li>• Know how to help my friends to protect themselves and make good choices online, including reporting any concerns to a trusted adult</li><li>• To know about different types of online scams people our age may experience, including ‘phishing’.</li></ul>	<ul style="list-style-type: none"><li>• Design, write and debug programmes that accomplish specific goals including controlling or simulating physical systems</li><li>• To write programs that have sequences and repetitions.</li><li>• Use sequence, selection and repetition in programmes</li><li>• Work with variables and various forms of input and output</li><li>• To check and refine a series of instructions.</li><li>• Detect, correct and justify errors in complex algorithms</li><li>• Solve problems in programs by breaking them down into smaller parts</li><li>• Use search technologies effectively, appreciate how results are selected and ranked being discerning in evaluating digital content</li><li>• Select, use and combine a variety of software, including internet based services, to design and create programs, systems or content to accomplish a given goal</li><li>• To be able to create their own database and present information from it.</li></ul>	
--	--	--	--