

## Progression of Milestones in Computing

	Computer Software and Systems	Online Safety	Programming	Film and Media	Data Handling
Rec	<b>Autumn 1</b> <ul style="list-style-type: none"> <li>I can use computing vocabulary.</li> <li>I know how technology is used.</li> <li>I know the camera app.</li> <li>I can take a picture on an iPad that is not blurry.</li> <li>I know how to view my photographs.</li> <li>I know how to flip the camera on the iPad.</li> <li>I know how to take a selfie.</li> <li>I know some simple examples of my personal information (e.g. name, address, birthday, age, location).</li> </ul>	<b>Spring 1</b> <ul style="list-style-type: none"> <li>I know why something online might make someone feel worried or sad.</li> <li>I can recognise different feelings.</li> <li>I know what a trusted adult is.</li> <li>I know adults who can help me if I have a problem online.</li> <li>I know how to use the internet to find information safely.</li> <li>I know devices I could use to access information on the internet.</li> <li>I know ways to stay safe online.</li> </ul>	<b>Spring 2</b> <ul style="list-style-type: none"> <li>I can follow a simple sequence of instructions.</li> <li>I can begin to program a Bee-Bot.</li> <li>I can use the words program, forwards, backwards, left and right to explain what I am doing.</li> <li>I can change the instructions on a Bee-Bot when it goes wrong.</li> <li>I know that an algorithm is a set of instructions to carry out a task, in a specific order.</li> <li>I know that an algorithm is a set of instructions.</li> <li>I can program a Bee-Bot and debug instructions if they go wrong.</li> </ul>	<b>Summer 1</b> <ul style="list-style-type: none"> <li>I can express myself as different characters using Mashcams.</li> <li>I can look at MiniMash slideshows and discuss the pictures in a group.</li> <li>I can explore Simple City on Purple Mash.</li> <li>I can identify ways that I can put information on the internet.</li> <li>I can create a book in 2CAS about my school trip.</li> </ul>	<b>Throughout the Year: Mathematics</b> <ul style="list-style-type: none"> <li>I know how to sort objects.</li> <li>I understand how objects have been sorted and can explain how.</li> </ul>
	Knowledge, skills and understanding are further developed through both inside and outside continuous provision in the indoor and outdoor classrooms. These include: Indoor: Construction, Mathematics, Reading, Malleable and Craft, Role Play, Writing Outdoor: Mud Kitchen, Bike Track, Construction, Music and Stage, Role Play, Sand, Storytelling, Water				
Y1	<b>Autumn 1</b> <ul style="list-style-type: none"> <li>I can type words into a keyboard.</li> <li>I know how to log in and out of Google Classroom</li> <li>I know why we need to log in and out.</li> <li>I know how to locate and look in 'Stream' and 'Classwork' tab in Google Classroom.</li> <li>I know how to open a Google Doc, type into it and save.</li> <li>I know how to screenshot an image</li> <li>I know how to upload a screenshot to Google Classroom.</li> <li>I know information is personal to someone (e.g family names, where someone lives, clubs they attend).</li> <li>I know why it is important to always ask a trusted adult before sharing any personal information.</li> </ul>	<b>Spring 1</b> <ul style="list-style-type: none"> <li>I know what might happen if we share a picture.</li> <li>I know some ways to keep myself safe online.</li> <li>I know that I can be an 'upstander' by choosing not to join in.</li> <li>I know adults in my life who I can ask for help.</li> <li>I can explain how things on the internet can hurt others.</li> <li>I know that liking or sharing can hurt others.</li> </ul>	<b>Spring 2</b> <ul style="list-style-type: none"> <li>I know what instructions are and can predict what might happen when they are followed.</li> <li>I can use code to make a computer program.</li> <li>I know what object and actions are.</li> <li>I know what an event is.</li> <li>I know how to use an event to control an object.</li> <li>I know how code executes when a program is run.</li> <li>I know what backgrounds and objects are.</li> <li>I can plan and code a computer program.</li> </ul>	<b>Summer 1</b> <ul style="list-style-type: none"> <li>I can create a sequence of pictures.</li> <li>I know how to take a clear photograph.</li> <li>I know that a photograph can be changed.</li> <li>I know how to edit my own photograph.</li> <li>I know how to use a search engine to search images.</li> <li>I know how to add an image to my photograph.</li> <li>I can create a photo collage using Keynote.</li> <li>I can describe how to behave online in ways that do not upset others and can give examples.</li> </ul>	<b>Summer 2</b> <ul style="list-style-type: none"> <li>I can represent data in different ways</li> <li>I know that data can be shown in different ways</li> <li>I can present data</li> <li>I can answer questions about the data</li> <li>I can click and drag objects</li> <li>I can identify questions to sort data in the most efficient way</li> <li>I can create a branching database</li> <li>I can give simple examples of how to find information using digital technologies, e.g. search engines, voice activated searching).</li> </ul>
Y2	<b>Autumn 1</b> <ul style="list-style-type: none"> <li>I know how to edit work on Google Docs by dragging the cursor or by selecting.</li> <li>I know how to change the text size, font, underline and make bold.</li> <li>I know how to insert images into Google docs.</li> <li>I know how to take a photo and edit it in the Photos app.</li> <li>I know how to insert a photograph onto Google Docs.</li> <li>I know how to save work in Google Classroom.</li> <li>I know how passwords can be used to protect information, accounts, and devices.</li> <li>I know what is meant by 'private' and 'keeping things private'.</li> </ul>	<b>Spring 1</b> <ul style="list-style-type: none"> <li>I know what personal information is.</li> <li>I know how my body might tell me if something 'doesn't feel right'.</li> <li>I know which adults I can ask them for help.</li> <li>I know what makes a good friend.</li> <li>I know that people online may not tell the truth.</li> <li>I know the difference between a secret and a surprise.</li> <li>I know what an advert is and what do if I have clicked it.</li> </ul>	<b>Spring 2</b> <ul style="list-style-type: none"> <li>I know what an algorithm is.</li> <li>I know that algorithms follow a sequence.</li> <li>I know how to program collision detection.</li> <li>I can design an algorithm that follows a timed sequence.</li> <li>I know that different objects have different properties.</li> <li>I know what different events do in code.</li> <li>I know the function of buttons in a program.</li> <li>I know how to debug simple programs.</li> </ul>	<b>Summer 1</b> <ul style="list-style-type: none"> <li>I know what animation is.</li> <li>I know what stop motion animation is.</li> <li>I know and use animation vocabulary.</li> <li>I can plan a stop motion animation of 10 frames or more.</li> <li>I can create my own stop motion animation of 10 frames or more.</li> <li>I know what onion skinning is.</li> <li>I can use onion skinning to make small changes.</li> <li>I can explain how information put online about someone can last for a long time and can be seen by others.</li> <li>I know who to ask for help.</li> </ul>	<b>Summer 2</b> <ul style="list-style-type: none"> <li>I know how to retrieve digital content from an interactive map.</li> <li>I know how a computer is used to monitor data.</li> <li>I can use keyboard skills on the iPad to draw and add text to a project.</li> <li>I know how computers would monitor items on the ISS.</li> <li>I know how to read temperatures using a thermometer and add the data to Google Sheets.</li> <li>I can interpret data.</li> <li>I can display the data in the form of a fact file using Keynote.</li> <li>I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.</li> </ul>

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Y3	<b>Autumn 1</b> <ul style="list-style-type: none"> <li>I know why it is important to log in and out.</li> <li>I know the correct way to sit at the keyboard.</li> <li>I know how to use the home, top and bottom row keys.</li> <li>I can practise typing with the left and right hand.</li> <li>I can use my typing skills to write paragraphs.</li> <li>I know about computer networks and their benefits.</li> <li>I know how connected devices can collect and share anyone's information with others.</li> </ul>	<b>Spring 1</b> <ul style="list-style-type: none"> <li>I know the SMART rules.</li> <li>I know what I should accept online.</li> <li>I know what is reliable online.</li> <li>I know the dangers of meeting up with someone I don't know in the real world.</li> <li>I know who I should tell if I come across something not safe online.</li> <li>I know things that I can do to keep safe online for each of the SMART rules.</li> <li>I can give advice about how to stay safe online.</li> </ul>	<b>Spring 2</b> <ul style="list-style-type: none"> <li>I know what a flowchart is and how flowcharts are used in computer programming.</li> <li>I know that there are different types of timers and select the right type for purpose.</li> <li>I know how to use the repeat command.</li> <li>I know the importance of nesting.</li> <li>I know how to design and create an interactive scene.</li> </ul>	<b>Summer 1</b> <ul style="list-style-type: none"> <li>I know the purpose of a book trailer.</li> <li>I can plan a book trailer.</li> <li>I know how to frame shots differently to tell a story.</li> <li>I know how to import and edit videos and photos into film editing software.</li> <li>I know how to add text and transitions to a video.</li> <li>I know how to evaluate a video edit.</li> <li>I know how the internet can be used to share beliefs, opinions and facts.</li> </ul>	<b>Summer 2</b> <ul style="list-style-type: none"> <li>I know the meaning of database vocabulary.</li> <li>I know how to use paper and computerised databases.</li> <li>I know how to sort, filter and interpret data.</li> <li>I know how to represent data in different ways.</li> <li>I know how to sort data for a purpose.</li> <li>I know the effects that some internet use can have on our feelings and emotional wellbeing.</li> </ul>
Y4	<b>Autumn 1</b> <ul style="list-style-type: none"> <li>I know that software can be used collaboratively.</li> <li>I know different strategies for keeping personal information private.</li> <li>I know how content shared online may be important to others.</li> <li>I know how to contribute to someone else's work.</li> <li>I know how to create effective presentations using Google classroom.</li> <li>I know how to create and share Google Forms.</li> <li>I know how to export data to a spreadsheet.</li> <li>I know that internet use is never fully private.</li> <li>I know about the digital age of consent.</li> <li>I know how to be respectful to others online and how to recognise healthy and unhealthy online behaviours.</li> </ul>	<b>Spring 1</b> <ul style="list-style-type: none"> <li>I know how to protect my online reputation and digital footprint.</li> <li>I know how to work out whether information online is true and reliable.</li> <li>I know how to protect my online reputation.</li> <li>I know how to get help if I regret sharing something online.</li> <li>I know how not to be an over-sharer.</li> <li>I know what phishing is.</li> <li>I know what a cyberbully is and how to deal with them.</li> <li>I know top tips on how to 'Be Internet Sharp' and 'Be Internet Alert'</li> <li>I know how to create a strong password online.</li> <li>I know how to show kindness online.</li> </ul>	<b>Spring 2</b> <ul style="list-style-type: none"> <li>I understand selection in computer programming.</li> <li>I know how an IF statement works.</li> <li>I know how to use coordinates in computer programming.</li> <li>I know the 'repeat until' command.</li> <li>I know how an IF/ELSE statement works.</li> <li>I know what a variable is in programming.</li> <li>I know how to use a number variable.</li> <li>I know how to create a playable game.</li> </ul>	<b>Summer 1</b> <ul style="list-style-type: none"> <li>I know how to use most of the tabs (e.g. insert, pages, themes) on Google Sites on my website.</li> <li>I know how to create a clear plan for my web page.</li> <li>I know how to create a professional looking web page with a clear style and easy to find information.</li> <li>I know how to create my web page by referring back to my checklist.</li> <li>I know how to create four web pages with a range of features.</li> <li>I can find out information about someone online and explain how it could have been created, copied or shared to bully them.</li> </ul>	<b>Summer 2</b> <ul style="list-style-type: none"> <li>I know how to log data within a spreadsheet.</li> <li>I know how to build a weather station.</li> <li>I know how to design an automated machine to respond to sensor data.</li> <li>I know how weather forecasts are made.</li> <li>I know how to use green screen technology in a video to present a weather forecast.</li> <li>I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.</li> <li>I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be.</li> </ul>
Y5	<b>Autumn 1</b> <ul style="list-style-type: none"> <li>I know what a search engine is and how to use it.</li> <li>I know how to search effectively.</li> <li>I know how to create an informative poster using Google Classroom software.</li> <li>I know how search engines work.</li> <li>I know how to credit people for the information I use.</li> <li>I know that not all information on the internet is true or accurate.</li> <li>I know how apps can access our personal information and how to alter the permissions.</li> </ul>	<b>Spring 1</b> <ul style="list-style-type: none"> <li>I know some risks in sharing videos publicly.</li> <li>I know what privacy settings are used for and how they can help.</li> <li>I know how to recognise when something 'doesn't feel right'.</li> <li>I know examples of content which may be appropriate or inappropriate to share online.</li> <li>I know the possible consequences of sharing without consent.</li> <li>I know people I can turn to for help.</li> <li>I know different tactics someone might use to pressurise or manipulate another person online.</li> <li>I know what to do if someone tries to pressure or manipulate me.</li> <li>I know how technology can be used positively.</li> </ul>	<b>Spring 2</b> <ul style="list-style-type: none"> <li>I know how to simplify code to create a playable game.</li> <li>I know what a simulation is.</li> <li>I know how to program a simulation using 2Code.</li> <li>To know what decomposition and abstraction are in computer science.</li> <li>I can use a real-life situation, decompose it and think about the level of abstraction.</li> <li>I know how to use friction in code.</li> <li>I know what a function is and how functions work in code.</li> <li>I know the different variable types are and how they are used differently.</li> <li>I know how to create a string.</li> <li>I know what concatenation is and how it works.</li> </ul>	<b>Summer 1</b> <ul style="list-style-type: none"> <li>I know how to create my own 19th century animation toy.</li> <li>I know and can explain what 'stop motion' means.</li> <li>I know how to plan my stop motion video, thinking about the characters I want to use.</li> <li>I know how to create a stop motion animation.</li> <li>I know how to edit and assess my stop motion animation.</li> <li>I know how apps can access our personal information and how to alter the permissions and how that information can be used online.</li> <li>I know how to recognise bullying online and how it is different in the real world, how to report and how to get help.</li> </ul>	<b>Summer 2</b> <ul style="list-style-type: none"> <li>I know how bit patterns represent images as pixels.</li> <li>I know how the data for digital images can be compressed.</li> <li>I know how to identify and explain the 'fetch, decode, execute' cycle.</li> <li>I know how to create a safe online profile and tinker with 3D design software.</li> <li>I know how to modify the design of a 3D object using CAD software.</li> <li>I know the positive and negative aspects of online communication.</li> </ul>

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Y6	<b>Autumn 1</b> <ul style="list-style-type: none"> <li>I know that there are lots of different types of secret codes.</li> <li>I know the importance of having a secure password.</li> <li>I know the importance of Bletchley Park to the World War II war effort.</li> <li>I know about some of the historical figures that contributed to technological advances in computing.</li> <li>I know how to research and present information about historical figures in computing.</li> <li>I know how to manage personal passwords effectively.</li> </ul>	<b>Spring 1</b> <ul style="list-style-type: none"> <li>I know the things I should and shouldn't share online.</li> <li>I know the dangers of talking to someone I don't know online.</li> <li>I know the dangers of taking photographs and sharing them online.</li> <li>I know things I can share for good attention.</li> <li>I know things that would create bad attention.</li> <li>I know that compliments and flattery might be used to pressurise me to do something.</li> <li>I know how search engines work and how they are selected and ranked.</li> <li>I know that social media may portray information that is not true or legal.</li> </ul>	<b>Spring 2</b> <ul style="list-style-type: none"> <li>I can create a playable game with a timer and a score.</li> <li>I know how to plan and use selection and variables.</li> <li>I know how the launch command works.</li> <li>I know what functions are and understand why they are useful.</li> <li>I know how functions are created.</li> <li>I know how to use flowcharts to create and debug code.</li> <li>I can create a simulation of a room in which devices can be controlled.</li> <li>I know how a user input can be used in a program.</li> <li>I know how 2Code can be used to make a text-adventure game.</li> </ul>	<b>Summer 1</b> <ul style="list-style-type: none"> <li>I can plan an effective film.</li> <li>I know how to edit videos effectively.</li> <li>I know how to produce an iMovie with some special effects and simple edits.</li> <li>I can describe all of the features of a computer including RAM, ROM, hard drive and processor.</li> <li>I can explain the ways in which anyone can develop a positive online reputation and protect it.</li> <li>I can describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me, or report it.</li> </ul>	<b>Summer 2</b> <ul style="list-style-type: none"> <li>I know how barcodes and QR codes work.</li> <li>I know how to explore how infrared waves transmit data.</li> <li>I know the uses of RFID.</li> <li>I know how to gather and analyse real-time data.</li> <li>I know how to analyse and evaluate data.</li> <li>I know issues online that give us negative feelings and know ways to get help.</li> </ul>