

Progression of Milestones in Computing

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

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

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