Computing Curriculum: Long term plan

Colour Key: Computer system and network; Creating media; Data and information; Programming

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Online Safety **Self-image and identity** **Online relationships**	Online Safety **Online reputation** Creating Media U2 **Digital painting** Choosing appropriate tools in a program to create art and making comparisons with working non-digitally. (Microsoft Paint or similar)	Online Safety **Online bullying** Computing systems and networks - Technology around us U1 **Technology around us** Recognising technology in school and using it responsibly (Paintz.app)	Online Safety **Managing online information** Data and information U4 **Grouping data** Exploring object labels, then using them to sort and group objects by properties. (Google slides or Powerpoint) Grouping data Spring 2 (science) 4	Online Safety **Health, Well-being and lifestyle** Programming Block A U3 **Moving a robot** Writing short algorithms and programs for floor robots and predicting program outcomes. (Bee-bot, blue-bot)	Online Safety **Privacy and security** **Copyright and ownership** Programming Block B U6 **Programming animations** Designing and programming the movement of a character on screen to tell stories. (Scratch Jnr)
Year 2	Online Safety **Self-image and identity** **Online relationships** Connecting systems and networks U1 **Information technology around us** Identifying IT and how its responsible use improves our world in school and beyond. (Google Slides/ PowerPoint)	Online Safety **Online reputation** Creating Media U2 **Digital photography** Capturing and changing digital photographs for different purposes. (Digital camera/Ipads)	Online Safety **Online bullying** Programming Block A U3 **Robot algorithms** Creating and debugging programs and using logical reasoning to make predictions. (Bee-bot, Blue-bot)	Online Safety **Managing online information** Creating Media U 5 Year 1) **Digital writing** Using a computer to create and format text, before comparing to writing non-digitally. (Google Docs or Microsoft Word)	Online Safety **Health, Well-being and lifestyle** Programming Block B U6 **Programming quizzes** Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz. (Scratch Jnr)	Online Safety **Privacy and security** **Copyright and ownership** Data and information U4 **Pictograms** Collecting data in tally charts and using attributes to organise and present data on a computer. (j2data pictogram)
Year 3	Online Safety **Self-image and identity** **Online relationships** Connecting systems and networks U1 **Connecting Computers** Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks (Painting program)	Online Safety **Online reputation** Creating Media U5 **Desktop Publishing** Creating documents by modifying text, images, and page layouts for a specified purpose. (Canva.com)	Online Safety **Online bullying** Programming Block A U3 **Sequencing Sounds** Creating sequences in a block-based programming language to make music (Scratch)	Online Safety **Managing online information** Creating Media U2 **Stop frame animation** Capturing and editing digital still images to produce a stop-frame animation that tells a story. (iMotion)	Online Safety **Health, Well-being and lifestyle** Data and information U4 **Branching databases** Building and using branching databases to group objects using yes/no questions. (j2data Branch and Pictogram) Note: related to Maths Move to summer 1?	Online Safety **Privacy and security** **Copyright and ownership** Programming Block B U6 **Events and actions in programs** Writing algorithms and programs that use a range of events to trigger sequences of actions. (Scratch)
Year 4	Online Safety **Self-image and identity** **Online relationships** Connecting systems and networks U1	Online Safety **Online reputation** Programming Block A U3 **Repetition in Shapes**	Online Safety **Online bullying** Creating Media U2 **Audio Production**	Online Safety **Managing online information** Creating Media U5 **Photo editing**	Online Safety **Health, Well-being and lifestyle** Data and information U4 **Data logging**	Online Safety **Privacy and security** **Copyright and ownership** Programming Block B **Repetition in games**

	The internet Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. (Various websites)	Using a text-based programming language to explore count-controlled loops when drawing shapes. (FMSLogo/Turtle academy)	Capturing and editing audio to produce a podcast, ensuring that copyright is considered. (Laptops-audacity)	Manipulating digital images and reflecting on the impact of changes and whether the required purpose is fulfilled. (Laptops-Paint.NET)	Recognising how and why data is collected over time, before using data loggers to carry out an investigation. (Data logger or similar)	Using a block-based programming language to explore count-controlled and infinite loops when creating a game. (Scratch)
Year 5	**Online Safety** **Self-image and identity** **Online relationships** **Connecting systems and networks U1** **Systems and searching** Recognising IT systems in the world and how some can enable searching on the internet. (Google Slides)	**Online Safety** **Online reputation** **Programming Block A U3** **Selection in physical computing** Exploring conditions and selection using a programmable microcontroller. (Crumble controller)	**Online Safety** **Online bullying** **Creating Media U2** **Video Production** Planning, capturing, and editing video to produce a short film. (Microsoft Photos)	**Online Safety** **Managing online information** **Data and information U4** **Flat file databases** Using a database to order data and create charts to answer questions. (j2data Database)	**Online Safety** **Health, Well-being and lifestyle** **Creating Media U5** **Introduction to vector graphics** Creating images in a drawing program by using layers and groups of objects. (Google Drawings/Publisher)	**Online Safety** **Privacy and security** **Copyright and ownership** **Programming Block B U6** **Selection in quizzes** Exploring selection in programming to design and code an interactive quiz. (Scratch)
Year 6	**Online Safety** **Self-image and identity** **Online relationships** **Connecting systems and networks U1** **Communication and collaboration** Exploring how data is transferred by working collaboratively online. (Google Slides)	**Online Safety** **Online reputation** **Data and information U4** **Introduction to spreadsheets** Answering questions by using spreadsheets to organise and calculate data. (Google sheets/Excel)	**Online Safety** **Online bullying** **Creating Media U2** **Webpage creation** Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. (Google sites)	**Online Safety** **Managing online information**	**Online Safety** **Health, Well-being and lifestyle** **Programming Block A U3** **Variables in games** Exploring variables when designing and coding a game. (Scratch)	**Online Safety** **Privacy and security** **Copyright and ownership** **Creating Media U5** **3D modelling** Planning, developing, and evaluating 3D computer models of physical objects. (Tinkercad)
						Programming Block B **Sensing movement** Designing and coding a project that captures inputs from a physical device. (Microbit and Microsoft Make Code)