Shine as Lights in the World

Computing Curriculum Overview

The three strands of computing are: Computer Science, Digital Literacy and Information Technology. These are colour coded within the computing curriculum overview and below relate to the units found within 'Teach Computing.'
Information technology – Computing systems and networks
Digital Literacy – Creating Media and Data and Information
Computer Science – Programming

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EY	Computing curriculum is imbedded into the learning in an integrated approach in line with development matters and the EYFS statutory framework 2022. Main objectives include: -To discuss online safety through stories. -To discuss sensible amounts of screen time. -To be able to talk about information relevant to them. -To use the internet as a learning tool. -To use positional language when giving instructions to peers. -To program a bee-bot to move to a given place following commands.					
Y1	**Technology around us** -To recognise technology in school and use it responsibly. -To log onto a computer.	**Digital painting** **To choose** -To use appropriate tools in a program to create art.	**Digital writing** -To use a computer to create a format text, before comparing to writing non-digitally.	**Grouping data** -To explore object labels. -To use these to sort and group objects by properties.	**Expresso Coding – On the move** -To learn that programs are executed by following clear instructions. -To understand that programs respond to	**Expresso Coding – Simple inputs** -To learn to combine start and input events to create more advanced apps and programs

		-To make comparisons with working non-digitally.			inputs to do different things.	using precise instructions.
Vocabulary	**Technology Computer Screen Space bar Mouse Keyboard Safely Click Drag Responsibly**	Tool Erase Fill Undo Primary colours Shape tool Line tool Brush style Pointillism	Word processor Font Keys Numbers Spacebar Backspace Select Text Italic Shift Cursor Toolbar Underline Bold	The same Object Label Group Search Image Properties Colour Size Shape Value Data More/less Most/fewest		
Y2	**Information technology around us** -To identify IT and how responsible use improves our world in school and beyond.	**Digital photography** -To capture and change digital photographs for different purposes.	**Making music** -To use a computer as a tool to explore rhythms and melodies, before creating a musical composition.	**Pictograms** -To collect data in tally charts and using attributes to organise and present data on a computer.	**Robot algorithms** -To create and debug program. -To use logical reasoning to make predictions.	**Programming quizzes** -To design algorithms and programs that use events to trigger sequences of code to make an interactive quiz.
Vocabulary	Information Technology Computer Barcode Scan	Device Capture Image Digital Landscape Portrait Filed of view Narrow Wide Format Framing Focal point Subject natter Compose Natura/artificial lighting Flash Focus Background/foreground Editing Tools Filter Changed Real	Music Quiet Loud Feelings Emotions Pattern Rhythm Pulse/Beat Pitch Tempo Notes Instrument Create Open Edit	Organise Tally chart Votes Total Pictogram Enter Compare Count Explain Attribute Difference Most/least popular Conclusion Block diagram	Instruction Sequence Clear Order Commands Prediction Design Route Debugging	Start Outcome Predict Blocks Actions Change Build Match Compare Evaluate
Y3	**Connecting computers** -To identify that digital devices have inputs, processes and outputs. -To identify how devices can be connected to make a network.	**Stop-frame animation** -To capture and edit digital still images to produce a stop-frame animation that tells a story.	**Desktop publishing** -To create a document by modifying text, images and page layouts for a specified purpose.	**Branching databases** -To build and use branching databases to group objects using yes/no questions.	**Sequencing sounds** -To create sequences in a block-based program language to make music	**Events and actions in programs** -To write algorithms and programs that use a range of events to trigger sequences of actions.
Vocabulary	Digital Device Input Output Process Program Connection Network	Animation Flip book Stop-frame animation Frame Sequence Image Photograph Setting	Desktop publishing Text Images Font style Template Orientation	Attribute Value Questions Table Objects Branching database Equal Even	Programming Scratch Blocks Code Sprite Costume Stage Backdrop Motion Point in direction	Motion Event Logic Move Resize Extension block Pen Action Errors Test

		Character Events Onion skinning Media Import Transition	Placeholder Copy Paste Layout Purpose	Separate Structure Compare Order Organise Selecting Information Decision tree	Go to Event Task Run the code Order Note Chord Bug	
Y4	**The internet** -To recognise the internet as a network or networks, including the WWW. -To recognise why we should evaluate online content.	Data logging -To recognise how and why data is collected over time before using data loggers to carry out an investigation.	**Photo editing** -To manipulate digital images. -To reflect on the impact of changes and whether the required purpose us fulfilled.	**Audio editing** -To capture and edit audio to produce a podcast, ensuing that copyright is considered.	**Repetition in shapes** -To use a text-based programming language to explore count-controlled loops when drawing shapes.	**Repetition in games** -To use a block-based programming language to explore count-controlled and infinite loops when creating a game.
Vocabulary	Network Router Network Security Network switch Server Wireless access point (WAP) Browser World Wide Web Content Links Files Download Sharing Ownership Permission Information	Input device Sensor Data logger Logging Data point Interval Analyse Data set Import Export Logged Collection Review Conclusion	Arrange Digital Crop Undo Copyright Composition Pixels Rotate Flip Effects Hue/Saturation Sepia Illustrator Vignette Retouch Clone Recolour Sharpen Brighten Composite Cut Copy Paste Original Border Layer	Audio Record Playback Input Output Sound Podcast Selection Mixing Time shift Export Sound file	commands code snippet pattern repetition repeat value trace decompose procedure	Loop Repeat Value Forever Count-controlled loop Animate Event block Duplicate Modify Refine
Y5	**Sharing information** -To identify and explore how information is shared between digital systems.	**Video editing** -To plan, capture and edit a video to produce a short film.	**Flat-file databases** -To use databases to order data. -To create charts to answer questions.	**Vector drawing** -To create images in a drawing program by using layers and groups of objects.	**Selection in physical computing** -To explore conditions and selection using a programmable microcontroller.	**Selection in quizzes** -To explore selection in programming to design and code n interactive quiz.
Vocabulary	System Connection Digital Input Process Output Protocol Address Chat Collaboration IP Address	Video Audio Recording Storyboard Script Soundtrack Dialogue Capture Zoom AV (Audio Visual) Videographer Zoom Pan Tilt Angle Lighting Setting Export	Database Record Field Sort Order Group Value Criteria Graph Chart Axis Compare Filter	Vector Drawing Tools Icons Toolbar Vector Drawing Move Resize Rotate Duplicate/Copy Organise Zoom Select Alignment Grid Handles Consistency	Components Connect Infinite Loop Output Devices Motor Condition Input Action Selection	Selection Condition True False Count-Controlled Loop Outcomes Conditional Statement

		Split Trim/Clip Titles Timeline Transitions Content Retake Special Effects Title Screen End Credits		Modify Layers Object Paste Group Ungroup Reuse Improvement Alternatives		
Y6	**Internet communication** -To recognise how the WWW can be used to communicate. -To understand that the WWW is used to search to find information.	**3D modelling** -To plan, develop and evaluate 3D computer models of physical objects.	**Webpage creation** -To design and create webpages, giving consideration to copyright, aesthetics and navigation.	**Induction to spreadsheets** -To answer questions by using spreadsheets to organise and calculate data.	**Variables in games** -To explore variables when designing and coding a game.	**Sensing** -To design and code a program that captures inputs from a physical device.
Vocabulary	Search Engine Refine Index Web Crawler Ranking Links Searching Selection communication public Private SMS Blog World Wide Web	Modelling Three-Dimensional Workspace Faces Vertices Edges Handles Resize Position Hole Design Modify	Web Page Website Browser Media Hypertext Markup Language (HTML) Logo Layout Header Purpose Copyright Home Page Preview Navigation	Spreadsheet Data Heading Cells Data Columns and Rows Data Format Common Attribute Formula Calculation Cell Reference Operation Range Graph Chart Evaluate Results Comparison	Variable Change Name Value Set Design Event Code Task Test Motion Callout	Programming If…then…else…variable Random Direction Navigation Motion Sensor Input Output Motor Alarm Signal