



## Computing Curriculum for St Erth Primary

Phase	Cycle	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS		Computing isn't in the EYFS curriculum Teachers to go by a needs met approach, using technology where it fits in with their current areas of learning.					
KS1	A	<b>Connecting systems and networks</b> <b>Technology around us (Y1)</b> <b>What technology do we find in school and how do we use it responsibly?</b> Recognising technology in school and using it responsibly <b>(Paintz.app)</b>	<b>Creating Media</b> <b>Digital painting (Y1)</b> <b>How can we create art digitally and how does it compare with non-digital art?</b> Choosing appropriate tools in a program to create art and making comparisons with working non-digitally. <b>(Microsoft Paint or similar)</b>	<b>Creating Media</b> <b>Digital Photography (2)</b> <b>How can you change photographs for different purposes</b> Capturing and changing digital photographs for different purposes <b>(iPads and pixlr.com)</b>	<b>Data and information</b> <b>Grouping Data (1)</b> <b>How can we sort and group objects?</b> Exploring object labels, then using them to sort and group objects by properties	<b>Programming</b> <b>Moving a robot (1)</b> <b>How can we write an algorithm to make a floor robot move?</b> Creating and debugging programs and using logical reasoning to make predictions. <b>(Bee-bot, Blue-bot)</b>	<b>Programming</b> <b>Robot algorithms (2)</b> <b>How can we create and debug programs?</b> Creating and debugging programs and using logical reasoning to make predictions. <b>(Bee-bot, Blue-bot)</b>
KS1	B	<b>Connecting systems and networks</b> <b>Technology around us (2)</b> <b>How can IT improve our world in school and beyond?</b> Information technology around us Identifying IT and how its responsible use improves our world in school and beyond. <b>(PowerPoint)</b>	<b>Creating Media</b> <b>Digital writing (1)</b> <b>How can we use a computer to create text and how is this different from non-digital text?</b> Using a computer to create and format text, before comparing to writing non-digitally. <b>(Microsoft Word)</b>	<b>Creating Media</b> <b>Digital music (2)</b> <b>How can we use a computer to explore rhythms and melodies?</b> Using a computer as a tool to explore rhythms and melodies, before creating a musical composition. <b>(Chrome Music Lab)</b>	<b>Data and information</b> <b>Pictograms (2)</b> <b>How can we collect and organize data on a computer?</b> Collecting data in tally charts and using attributes to organise and present data on a computer. <b>(j2data pictogram)</b>	<b>Programming</b> <b>Introduction to animations (1)</b> <b>How can we program a character to tell a story?</b> Designing and programming the movement of a character on screen to tell stories. <b>(Laptops - Scratch Jnr)</b>	<b>Programming</b> <b>Programming quizzes (2)</b> <b>How can we design a program to create an interactive quiz?</b> Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz. <b>(Laptops – Scratch Jnr)</b>
LKS2	A	<b>Connecting systems and networks</b> <b>Connecting Computers (3)</b> <b>What devices have inputs, processes, and outputs?</b> Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks <b>(Painting program)</b>	<b>Creating Media</b> <b>Desktop Publishing (3)</b> <b>How can we create documents for a specific purpose?</b> Creating documents by modifying text, images, and page layouts for a specified purpose. <b>(Canva.com)</b>	<b>Programming</b> <b>Sequencing Sounds (3)</b> <b>How can we use programming language to make music?</b> Creating sequences in a block-based programming language to make music <b>(Scratch)</b>	<b>Data and information</b> <b>Data logging (4)</b> <b>How can we collect data over time and why is it useful?</b> Recognising how and why data is collected over time, before using data loggers to carry out an investigation. <b>(Data logger or similar)</b>	<b>Creating Media</b> <b>Audio Production (4)</b> <b>How can we capture and edit audio produce a podcast?</b> Capturing and editing audio to produce a podcast, ensuring that copyright is considered. <b>(Laptops-audacity)</b>	<b>Programming</b> <b>Events and actions in programs (3)</b> <b>How can we write programs for a sequence of actions?</b> Writing algorithms and programs that use a range of events to trigger sequences of actions. <b>(Scratch)</b>
LKS2	B	<b>Connecting systems and networks</b> <b>The internet (4)</b> <b>What is the internet and why should we evaluate content?</b> Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. <b>(Various websites)</b>	<b>Creating Media</b> <b>Stop frame animation (3)</b> <b>How can we use images to produce an animation?</b> Capturing and editing digital still images to produce a stop-frame animation that tells a story. <b>(iMotion)</b>	<b>Programming</b> <b>Repetition in Shapes (4)</b> <b>How can we use programming language for controlled loops when drawing shapes?</b> Using a text-based programming language to explore count-controlled loops when drawing shapes. <b>(FMSLogo/Turtle academy)</b>	<b>Data and information</b> <b>Branching databases (3)</b> <b>How can we use a branching database to group objects?</b> Building and using branching databases to group objects using yes/no questions. <b>(j2data Branch and Pictogram)</b>	<b>Creating Media</b> <b>Photo editing (4)</b> <b>How can we manipulate images to fulfil a purpose?</b> Manipulating digital images and reflecting on the impact of changes and whether the required purpose is fulfilled. <b>(Laptops-Paint.NET)</b>	<b>Programming</b> <b>Repetition in games (4)</b> <b>How can we create infinite loops using block-based programming language?</b> Using a block-based programming language to explore count-controlled and infinite loops when creating a game. <b>(Scratch)</b>
UKS2	A	<b>Connecting systems and networks</b> <b>Systems and searching (5)</b> <b>What IT systems are around the world and how do they help us search the internet?</b> Recognising IT systems in the world and how some can enable searching on the internet. <b>(PowerPoint)</b>	<b>Programming</b> <b>Selection in physical computing (5)</b> <b>How can we program a microcontroller?</b> Exploring conditions and selection using a programmable microcontroller. <b>(Crumble controller)</b>	<b>Creating Media</b> <b>3D modelling (6)</b> <b>How can we develop a 3D computer model of a physical object?</b> Planning, developing, and evaluating 3D computer models of physical objects. <b>(Tinkercad)</b>	<b>Data and information</b> <b>Flat file databases (5)</b> <b>How can we use a database to answer questions?</b> Using a database to order data and create charts to answer questions. <b>(j2data Database)</b>	<b>Creating Media</b> <b>Introduction to vector graphics (5)</b> <b>How can we use layers to create digital images?</b> Creating images in a drawing program by using layers and groups of objects. <b>(Google Drawings/Publisher)</b>	<b>Programming</b> <b>Selection in quizzes (5)</b> <b>How can we design and code an interactive quiz?</b> Exploring selection in programming to design and code an interactive quiz. <b>(Scratch)</b>
UKS2	B	<b>Connecting systems and networks</b> <b>Communication and collaboration (6)</b> <b>How is data transferred to allow us to work collaboratively?</b> Exploring how data is transferred by working collaboratively online. <b>(PowerPoint)</b>	<b>Creating Media</b> <b>Website creation (6)</b> <b>How can we design and create a webpage?</b> Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. <b>(Google sites)</b>	<b>Programming</b> <b>Variables in Games (6)</b> <b>How can we create variables to code a game?</b> Exploring variables when designing and coding a game. <b>(Scratch)</b>	<b>Programming</b> <b>Sensing Movement (6)</b> <b>How can we code a project that uses inputs from a physical device?</b> Designing and coding a project that captures inputs from a physical device <b>(microbits)</b>	<b>Data and information</b> <b>Introduction to spreadsheets (6)</b> <b>How can we use a spreadsheet to organise and calculate data?</b> Answering questions by using spreadsheets to organise and calculate data. <b>(Excel)</b>	<b>Creating Media</b> <b>Video Production (5)</b> <b>How can we produce a short film?</b> Planning, capturing, and editing video to produce a short film. <b>(Microsoft Photos)</b>

Information Technology: **Programming**

Computer Science: **Creating Media; Data and Information**

Digital Literacy: **Connecting systems and networks**; Online Safety is taught throughout the school as a separate element using Common Sense Media