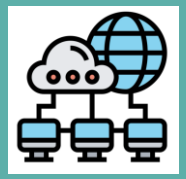
Broughton-in-Amounderness Church of England Primary School

Love learning, life, one another and God

Computing Skill Progression

	EYFS	KS1	LKS2	UKS2
Computer Science - Programming 	• To predict the outcome of a command on a device. • To be able to run a command on a device. • To be able to give directions/commands. • To be able to start to sequence from the same place. • To be able to compare left and right turns.	**Y1 Moving a Robot** • I can give a sequence of instructions. • I can predict the outcome of a sequence involving 'forwards' and 'backwards' commands • I can experiment with 'turn' and 'move' commands to move a robot • I can explain what my program can do. • I can identify several possible solutions to a problem. **Y1 Programming Animations** • To be able to use commands to make a sprite move. • To be able to join blocks together. • To be able to run a program. • To be able to change the values of blocks. • To be able to use more than one sprite in a program. • To be able to test a program that I have created.	**Y3 Sequencing Sounds** • I can identify the objects in a Scratch project (sprites, backdrops) • I can identify that each sprite is controlled by the commands I choose • I can start a program in different ways • I can explain what a sequence is • I can decide the actions for each sprite in a program • I can implement my algorithm as code. **Y3 Events and Actions in Programs** • I can choose which keys to use for actions and explain my choices • I can choose a suitable size for a character in a maze • I can use a programming extension • I can choose suitable keys to turn on additional features • I can test a program against a given design • I can make design choices and justify them.	**Y5 Selection in Physical Computing** • To create a simple circuit and connect it to a microcontroller. • To connect more than one output component to a microcontroller. • To explain whether a condition is true of false. • To identify a real-world example of a condition starting an action. • To use selection to produce an intended outcome. **Y6 Selection in Quizzes** • To be able to recall how conditions are used in selection. • To be able to identify and modify conditions in a program. • To understand how to identify the condition and outcomes in an 'if... then... else...' statement. • To be able to create a program with different outcomes using selection. • To be able to explain that program flow can branch according to a condition.

		Y2 Robot Algorithms • I can use an algorithm to program a sequence on a floor robot. • I can predict the outcome of a sequence. • I can identify different routes around my mat. • I can explain what my algorithm should achieve. **Y2 Programming Quizzes** • I can copy a simple line of code. • I can predict the outcome of a sequence of commands. • I can work out the actions of a sprite in an algorithm. • I can choose backgrounds for the design. • I can build sequences of blocks to match my design.	**Y4 Repetition in Shapes** • To be able to program a computer by typing commands. • To be able to explain the effect of changing a value of a command. • To be able to write an algorithm to produce a given outcome. • To be able to test my algorithm in a text-based language. • To be able to predict the outcome of a program containing a count-controlled loop. • To know how to design a program that includes count-controlled loops. **Y4 Repetition in Games** • List an everyday task as a set of instructions including repetition. • Modify loops to produce a given outcome. • Explain what the outcome of a repeated action should be. • Identify which parts of a loop can be changed. • Refine the algorithm in my own design.	

Digital Literacy - Networks 	• To be able to name the main parts of a computer and what they are used for. • To be able to switch on a computer and log into a computer.	**Y1 Technology Around Us** • To be able to locate examples of technology in the classroom. • To be able to use a track pad to click and drag. • To be able to use a track pad to create a picture. • To be able to type my own name on a computer. • To be able to save a file. • To retrieve a file. **Y2 Information Technology Around Us** • To explain technology as something which helps us. • To identify examples of information technology in the classroom and beyond. • To identify examples of computers. • To explain what information technology is.	**Y3 Connecting Computers** • To be able to explain that digital devices accept inputs and produce outputs. • To be able to classify input and output devices. • To be able to describe a simple process. • To recognise the similarities and difference between using digital devices and using non-digital tools. **Y4 The Internet** • Describe the internet as a network of networks. • Demonstrate how information is shared across the internet. • Describe networked devices and how they connect. • Explain that the internet is used to provide many services and contains websites and web pages. • Explain the types of media that can be shared on the WWW.	**Y5 Systems and Searching** • Complete a web search to find specific information. • Refine search results and compare results from different search engines. • To be able to release a search term to the search engine's index. • Explain how search results are ranked. • Identify and compare a variety of ways communicating over the internet. **Y6 Communication and Collaboration** • Describe that a computer system features inputs, processes and outputs. • Identify tasks that are managed by a computer system and identify their human elements • Explain that networked digital devices have an address and that data is transferred over a network in packets. • Send information over the internet in different ways. • To make comparisons between working online and offline.

Information Technology- Text and Images 	• To be able to use a mouse to click and drag objects on a screen. • To be able to type my name on a computer. • To be able to delete letters. • To be able to use arrow keys to move a cursor.	**Y1 Digital Writing/Y2 Touch Typing** • I can identify and find keys on a keyboard. • I can enter text into a computer. • I can select a word by double-clicking it. • I can explain the differences between typing and writing. **Y2 Digital Photography** • To be able to explain how I captured a digital photo. • To be able to edit and improve an image. • To explore the effect that light has on a photo. • To identify which photos are real and which have been changed.	**Y3 Desktop Publishing** • To recognise that text and images can communicate messages clearly. • To be identity the advances and disadvantages of using text and images. • To change the font style, size and colours for a given purpose. • To be able to explain what 'page orientation' means. • To be able to recognise placeholders and say why they are important. • To understand the best locations for my content. **Y4 Photo Editing** • I can use photo editing software to crop an image. • I can experiment with different colour effects. • I can add to the composition of an image by cloning. • I can experiment with tools to select and copy part of an image. • I can create a project that is a combination of other images.	**Y5 Video Production** • To be able to explain that video is a visual media format. • To experiment with different camera angles. • To be able to create a storyboard. • To be able to store, retrieve and export recordings to a computer. • To evaluate my own video and share opinions. **Y6 Web Page Creation** • To explore a website. • To be able to suggest media to include on a web page. • To be able to find copyright-free images. • To add content to my own web page. • To be able to describe why navigation paths are useful. • To be able to evaluate the user experience of a website.
Information Technology – Data Handling	• To be able to count groups of objects. • To be able to say which group is 'more' and which is 'less'.	**Y1 Grouping Data** • Describe objects using labels. • Identify the label for a group of objects.	**Y3 Branching Databases** • Create two groups of objects by one attribute.	**Y5 Flat-File Databases** • To create multiple questions about the same field. • To explain what a 'field' and a 'record' is in a database.

		• Record how many objects are in a group. • Compare groups of objects. • Record and share my findings. **Y1 Data Pictograms** • To organise and record data in a tally chart. • To use a computer to view data in a different format. • To use pictograms to answer simple questions about objects. • To collect the data I need. • To draw conclusions from a pictogram.	• Create groups of objects within existing groups and arrange them in a tree structure. • To group objects by using yes/no questions. • To use my own branching database to answer questions. • Explain what information data is telling me. **Y4 Data Logging** • Identify data that can be gathered over time. • Explain that sensors are input devices. • To discuss the data that I have captured. • To interpret data and draw conclusions from the data that I have collected.	• To choose which field to sort data by to answer a given question. • To use a filter to refine a chart. • To refine a search in a real-world context. **Y6 Spreadsheets** • To ask simple relevant questions which can be answered using data. • Explain the relevance of a cell's data type. • Construct a formula in a spreadsheet. • Identify that changing inputs changes outputs. • To produce a graph to answer questions.
Digital Literacy – Online Safety	• To know that I can so 'no' or 'please stop' when someone asks me to do something that makes me feel sad. • To understand what 'online' means.	Online safety is interwoven throughout each curriculum unit. Teachers will use Project Evolve to asses children's knowledge in the following areas: Self-Image and Identity, Online Relationships,	Online safety is interwoven throughout each curriculum unit. Teachers will use Project Evolve to asses children's knowledge in the following areas: Self-Image and Identity, Online Relationships,	Online safety is interwoven throughout each curriculum unit. Teachers will use Project Evolve to asses children's knowledge in the following areas: Self-Image and Identity, Online Relationships,

	• To understand that I can put information online for others to see. • To understand that being unkind online can make you feel angry, upset and sad. • To understand that you can use the internet to find things out. • To be able to name at least one trusted adult who can help them stay safe online. • To identify and name examples of their own personal information. • To recognise that objects and work can belong to them.	Online Reputation, Online Bullying, Managing Online Information, Health, Well-being and Lifestyle, Privacy and Security, Copyright and Ownership.	Online Reputation, Online Bullying, Managing Online Information, Health, Well-being and Lifestyle, Privacy and Security, Copyright and Ownership.	Online Reputation, Online Bullying, Managing Online Information, Health, Well-being and Lifestyle, Privacy and Security, Copyright and Ownership.