Mere Green Primary School
Computing Progression Overview

Year Group	Computer Science	Information Technology	Digital Literacy
Year 1	Identify and list the steps of a known task in order. Understand that we control computers by giving them instructions. Create a simple program e.g. to control a floor robot. Understand what an algorithm is. Create a simple algorithm. Identify and explain patterns in groups of objects. Debug an error in a simple algorithm or program e.g. for a floor robot. Predict the outcome of a simple algorithm or program.	Name a range of digital devices. Explain technology as something that helps us. Locate examples of technology – recognise that a range of devices contain computers, e.g washing machine, car. Recognise and use a range of output devices, e.g. printer, speakers, monitor/screen. Recognise and use a range of input devices e.g mouse, keyboard, touchscreen. Recognise and use a range of input devices, e.g. mouse, keyboard, microphone, touchscreen Select media (e.g. images, video, sound) to present information on a topic. Understand that you can edit and change digital content. Select basic options to change the appearance of digital content. Combine media with support to present information, e.g. text and images.	To know that the internet is many devices connected to one another. Understanding that we are connected to others when using the internet. Understanding some of the ways we can use the internet. To know what to do if you feel unsafe or worried online – tell a trusted adult. To know that people you do not know on the internet (online) are strangers and are not always who they say they are. To know that to stay safe online it is important to keep personal information safe. To know that 'sharing' online means giving something specific to someone else via the internet and 'posting' online means placing information on the internet. To be able to recognise what a digital footprint is and how to be careful about posting online. Recognising how actions on the internet can affect others.

		Apply edits to digital content to achieve a particular effect.	
		Draw lines and mark make.	
		Change colours and brush sizes.	
		Import and export my project	
		Describe objects using labels.	
		Identify the label for a group of objects.	
		Identify that objects can be counted.	
		Find objects with similar properties.	
		Describe objects in different ways.	
		Count objects in different ways.	
		Count objects with the same properties.	
		Compare groups of object	
Year 2	Understand that computers have no intelligence and we have to program them to do things. Understand that the order of instructions in an algorithm is important. Understand that instructions in an algorithm need to be clear and	Identify examples of computers. Describe some uses of computers. Identify that a computer is a part of IT (Information Technology). Identify examples of IT and that some IT can be used in more than one way.	To explain what is meant by online information and know the difference between online and offline. To recognise what information is safe to be shared online.

Unambiguous. Evaluate the success of an algorithm or program. Identify and correct errors in a given algorithm or program (debugging). Use the language of... then to describe the relationship between two actions.	Find examples of IT and talk about the uses of information technology. To recognise common types of technology. Demonstrate how IT devices work together and say why we use IT. Identify the choices that I make when using IT. Use IT for different types of activities. Explain the need to use IT in different ways. Film high quality videos using the front and back camera. Film in slow motion for different effects. When editing videos, crop parts that are not needed. Create new projects on iMovie. Add photos and videos to a project. Understand the terms import and export and how to complete each of them. Explain that animation is a sequence of drawings or photographs. Relate animated movement with a. sequence of images. Review and improve and animation.	To explain why we need passwords and what makes a strong password. To understand that they need to ask permission before sharing content online and explain why. To understand that they have the right to deny their permission to information about them being shared online. To know who they can ask for help with online worries. To understand and use strategies to work out if online information is reliable or not.

		Evaluate the impact of adding other media to an animation	
		Recognise that we can count and compare objects using tally charts.	
		Recognise that objects can be represented as pictures.	
		Explain what a pictogram shows.	
		Create pictograms to arrange objects by an attribute.	
		Tally objects using a common attribute.	
		Choose a suitable attribute to compare people	
Year 3	Understand that we can decompose a problem into smaller parts to make it simpler.	Explain that digital devices accept inputs.	To differentiate between fact, opinion and belief online.
	Remix and change an existing program.	Explain that digital devices produce outputs.	To explain how to deal with upsetting online content and explore how technology can impact on mood.
	Use repetition to make programs more efficient.	Classify input and output devices.	
		Describe a simple process. Explain how they use digital devices in different activities.	To know how to identify reliable information online.
	Predict the outcome of a more complex program, e.g. in Scratch.		
		Recognise similarities between using digital devices and non-digital tools	To recognise that digital devices communicate with each other to share personal information.
	Use forever loops in a program.		
	Choose which lets to use for actions and explain choices made.	Demonstrate how information can be passed between devices.	To explain what social media platforms are used for.
		Explain the role of a switch, server and wireless access point in a network.	
	Explain the relationship between an event and an action.	Recognise that a computer network is made up of a number of devices.	To recognise why social media platforms are age restricted.

Identify ways to improve a program.	Identify how devices in a network are connected together.	To start to explore how to protect your identify and personal information online.
Programme a movement for a character created.	Add voice overs to iMovie projects.	
Choose blocks to set up a program.	Disable or allow Ken burns effect.	
Use a programming extension.	Add soundtracks to iMovie projects.	
Choose suitable keys to turn on additional features.	Add titles as introductions and conclusions.	
	Trim and arrange clips.	
	Add suitable posters, stickers, emoji's and Memojis.	
	Use filters and music to enhance mood.	
	Export and import projects into relevant applications.	
	Build a single composition with multiple photos and other graphic elements.	
	Hide parts of photos using 'instant alpha'.	
	Crop, mask, edit and layer photos	
	Create questions with yes/no answers.	
	Identify the object attributes needed to collect relevant data.	
	Create a branching database.	
	Explain why it is helpful for a database to be well structured.	

		Identify objects using a branching database. Compare the information shown in a pictogram with a branching database	
Year 4	Use diagrams to represent an algorithm, e.g. a flowchart. Create a program using a range of events/inputs to control what happens. Use selection in algorithms and programs, i.e. if... then... Decompose a problem and create a solution (sub-routine) for each part. Use procedures in programs to create a sub-routine e.g. a procedure called 'square' in Logo.	Demonstrate how information is shared across the internet. Describe the internet as a network of networks. Discuss why a network needs protecting. Describe how to access websites on the WWW. Describe where websites are stored when uploaded to the WWW. Explain the types of media that can be shared on the WWW. Explain that internet services can be used to create content online. Explain what media can be found on websites. Recognise that I can add content to the WWW. Identify digital devices that can record and playback sound. Use digital devices to record sound. Explain that a digital recording is stored as a file. Explain that audio can be changed through editing.	To differentiate between fact, opinion and belief online. To explain how to deal with upsetting online content and explore how technology can impact on mood. To know how to identify reliable information online. To recognise that digital devices communicate with each other to share personal information. To explain what social media platforms are used for. To recognise why social media platforms are age restricted. To start to explore how to protect your identify and personal information online.

		Show that different types of audio can be combined and played together. Customise a virtual drummer's performance using 'Drummer'. Recognise note lengths and common percussion instruments. Programme drum sounds to create drumbeat using the Beat Sequencer. Play and record chords and melodies using Touch instruments. Layer multiple instruments with drums to create full song Explain the data gathered over time can be used to answer questions. Use a digital device to collect data automatically. Explain that a data logger collects 'data points' from sensors over time. Use data collected over a long duration to find information. Identify the data needed to answer questions. Use collected data to answer questions	
Year 5	Recognise that different solutions exist for the same problem. Recognise variables in a program.	Describe that a computer system features inputs, processes, and outputs. Explain the benefits of a given computer systems.	To know a range of strategies for checking the validity of online content. To understand that passwords need to be strong and that apps require some form of passwords.

Use two-way selection, i.e. if... then... else... Create programs including repeat until loops. Create simple variables, e.g. to keep score or remove lives in a game.	Identify the human elements of a computer system. Explain data is transferred over networks in packets. Explain that networked digital devices have unique addresses. Recognise that data is transferred using agreed methods. Explain what makes an effective video. Identify digital devices that can record video. Capture video using a range of techniques. Create and save video content. Identify that video can be improved through reshooting and editing. Make edits to a video. Store, retrieve and export recordings. Discover what an infographic is. Arrange content visually to present data and information in an infographic Use a form to record information. Compare paper and computer-based databases. Outline how grouping and then sorting data allows us to answer questions.	To recognise a couple of the different types of online communication and know who to go to if they need help with any communication matters online. To know how to search for simple information about a person, such as their birthday or key life moments. To know what bullying is and that it can occur both online and in the real world. To recognise when health and wellbeing are being affected in either a positive or negative way through online use. To know strategies to combat the negative effects of online use.

		Explain that tools can be used to select specific data.

Explain that computer programmes can be used to compare data visually.

Apply knowledge of a database to ask and answer real-world question | |
| **Year 6** | Predict what will happen in a program or algorithm (e.g. change of output) when the input changes (e.g. sensor, data or event)

Understand the difference between and use if... then... and if... then...else... statements.

Combine a variable with relational operators (< = >) to determine when a program changes, e.g. if score > 5, say "well done"

Can design a physical computing system that uses sensors, e.g. using a flow chart. | Compare results from different search engines.

Complete a web search to find specific information and refine my search if needed.

Explain why we need tools to find things online.

Recognise the role of web crawlers in creating an index.

Relate a search item to the search engine's index.

Explain that a search engine follows rules to rank relevant pages.

Suggest criteria that a search engine checks to decide on the order of results.

Describe some of the ways search results can be influenced.

Explain how search engines make money

Recognise some of the limitations of search engines.

Choose methods of communication to suit a particular purpose. | To discuss a range of issues online that can leave pupils feeling sad, frightened, worried or uncomfortable and can describe numerous ways to get help.

To explain how sharing online can have both positive and negative impacts on your reputation and know what a digital reputation is.

To be aware of how to seek consent from others before sharing material online and can describe how content can still be shared online even if it is set to private.

To understand the importance of capturing evidence of online bullying and can demonstrate some of these methods on the devices used at school.

To describe ways to manage passwords and strategies to add extra security such as two-factor authentication. |

			Explain different ways in which people communicate.	To explain what to do if passwords are shared, lost, or stolen.
			Identify that there are a variety of ways of communicating over the internet. Add cutaways and B-rolls to an iMovie production.	To explain ways to increase their privacy settings and understand why it is important to keep their software updated to prevent data corruption and hacking.
			Add clips with an overlay effect.	
			Change the overlay style.	
			Modify transitions between clips.	
			Add a lower-third title.	
			Draw a thumbnail image of your scene that includes perspective and point of view.	
			Imitate the illustration style in the book you have used for influence.	
			Create a book cover illustration in Sketches School.	
			Export illustration	
			Identify questions which can be answered using data.	
			Explain that objects can be described using data.	
			Explain that formulas can be used to produce calculated data.	
			Apply formula to data, including duplicating.	

		Create a spreadsheet to plan an event. Choose suitable ways to present dat	