Computing Whole School Curriculum Map

	Autumn	Spring	Summer
Year 1	**Digital painting** Children will develop their understanding of a range of tools for digital painting. They will create their own digital painting from inspiration from other artists.	**Data and Information- Grouping data** Children will develop their confidence in logging onto the computer, saving and retrieving documents. Children will be choosing images and labelling them using different software.	**Programming- Moving a robot** Children will explore commands for a floor robot and use this knowledge to predict outcomes. Children will be introduced to the early stages of programming and the use of algorithms.
Year 2	**Digital photography:** Children will learn how different devices can be used to capture photographs. They will gain experience in capturing, editing and improving their photos.	**Data and Information- Pictograms** Children will begin to understand what data is and how data can be collected. Children will learn how to present their data in the form of pictograms and block diagrams.	**Programming- robot algorithms.** Children will develop their understanding of giving instructions in a sequence. They will give commands and orders to predict and investigate outcomes. They will design, test and de-bug their own algorithms.
Year 3	**Computer networks- connecting computers** Children will develop their understanding of digital devices with a focus on inputs, processes and outputs. They will compare digital and non-digital devices. Children will be introduced to computer networks and their infrastructure and they will be able to describe the benefits of a network.	**Programming- Events and Actions** Children will consolidate their prior learning about algorithms. Children will be designing their own algorithms to control a sprite. Children will design and code their own maze- tracing program.	**Data and Information- Branching Databases** Children will develop their understanding of what a branching database is. Children will use yes or no questions to sort groups of objects. Children will use different software to create and test their own branching database.

Year 4	**Computer networks The Internet** Children will apply their knowledge and understanding of networks to understand the internet as a network. Children will explore the World Wide Web to learn about who owns content and what they can access, add and create. They will evaluate online content to decide how honest, accurate or reliable it is.	**Programming- repetition in games** Children will explore the concept of repetition in programming using Scratch. Children will look at the difference between count controlled and infinite loops and use their knowledge to modify existing animations and games. They will design and create a game which uses repetition.	**Creating media- Photo editing** Children will develop their understanding of how digital images can be changed and edited, and how they can be resaved and reused. They will consider the impact that editing images can have and evaluate the effectiveness of their choices.
Year 5	**Computing Systems – Sharing Information** Children will develop their understanding of computer systems and how information is transferred between systems and devices. Children will be able to explain how information is found on the World Wide Web and learn how search engines work (including how they select and rank results)	**Programming- MicroBit** Children will be working with MicroBit and they will be able to upload programmes and use their prior knowledge to set up forever loops within the program. Children will be able to design, create and edit their own design that will appear on the MicroBit. Children will create their own step counter using the MicroBit.	**Creating media- Video editing** Children will learn to create short videos. Children will work in small groups to plan, capture and edit short videos. Children will have the opportunity to reflect on and assess their progress in creating a video.
Year 6	**Computing Systems- Communication** Children will learn how data is transferred over the internet. Children will learn about the structure of data packets and how these support communication across networks. Children will work on a shared project together, working responsibly by considering what should and should not be shared on the internet.	**Programming- Variables in games** Children will explore the concept of variables in programming through games in Scratch. Children will create a simulation of a scoreboard using the Use- Modify- Create model. Children will apply their knowledge of variables and design to improve their game in Scratch.	**Data and Information- Spreadsheets** Children will be supported in organising data into column and rows to create their own data set. Children will be taught howto format their data to support with calculations. Children will apply formulas with their data set. Children will use a spreadsheet to plan an event.