Computing Long-Term Sequence Content Progression with our BIG IDEAS (Substantive Concepts)

|	Nursery	Reception	Year 1	Year 2
Autumn 1	**DIGITAL LITERACY** **Using technology safely** Pupils learn to recognise who we can trust with information and how that links to the online world.	**I am a super surfer!** Pupils learn to recognise on and offline technology and how to use it safely with the help of trusted adults.	**COMPUTER SCIENCE** **Basic computing skills** Pupils learn how to log in and shut down a computer accurately and begin to understand the importance of a password.	**COMPUTER SCIENCE** **What is a computer?** Pupils learn how to identify a computer's different parts and talk about the role computers play in our society.
Autumn 2			**DIGITAL LITERACY** **Using text-based programs to process and format text and images** Pupils learn how to use a word processing program to write and format text. They add digital images and consider the audience for their work.	**INFORMATION TECHNOLOGY** **Unplugged algorithms** Pupils build on their knowledge of what an algorithm is and how we can program computers to use algorithms.
Spring 1	**COMPUTER SCIENCE** **Understanding the parts of a computer** Pupils learn to recognise the different parts of a computer	**COMPUTER SCIENCE** **Look what I can do** Pupils learn that information can be used and created using technology.	**INFORMATION TECHNOLOGY** **Unplugged algorithms** Pupils learn what an unplugged algorithm is and create and apply them to an on-screen program.	**INFORMATION TECHNOLOGY** **Programming using Scratch Jr.** Pupils use the Scratch Jr app to write their own block code for several different projects.
Spring 2			**INFORMATION TECHNOLOGY** **Programming, coding and robotics** Pupils explore how to control both physical and virtual robots with a sequence of commands.	**DIGITAL LITERACY** **Storing and presenting data** Pupils are taught what data is, and how we store that data in different ways. Storing data on a computer allows us to quickly sort and present it as information in graphs and charts.
Summer 1	**INFORMATION TECHNOLOGY** **Using programming devices** Pupils use different types of devices & to give and follow instructions.	**INFORMATION TECHNOLOGY** **I am a computer scientist** Pupils learn cause and effect in computing.	**COMPUTER SCIENCE** **Data collection and representation using Pictograms** Pupils explore how to transfer physical data from a tally chart into a digital pictogram. They compare the difference with creating a physical pictogram.	**COMPUTER SCIENCE** **Modifying text and images** Pupils look at software they can use to present their work. They will expand on previous skills such as using a keyboard, formatting text and how to use images in their work.
Summer 2			**COMPUTER SCIENCE** **Presenting information** Pupils consider a variety of ways to present cross-curricular information digitally, and compare the advantages and disadvantages with paper-based content.	**Presenting information** Pupils explore and learn how to present information to an audience using technology.
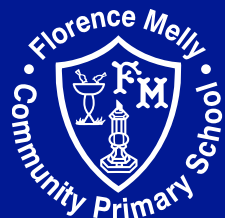
FLORENCE MELLY COMMUNITY PRIMARY SCHOOL
COMPUTING CURRICULUM MAP
IF YOU CAN DREAM IT, YOU CAN DO IT!

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	Year 3	Year 4	Year 5	Year 6
Autumn 1	**INFORMATION TECHNOLOGY** **Composing emails** Pupils explore the different advanced features of Microsoft Word. They will also use these skills to compose an email.	**INFORMATION TECHNOLOGY** **Branching databases** Pupils learn about the concept of a branching database and create their own using presentation software.	**INFORMATION TECHNOLOGY** **Create and search databases** Pupils use Excel to create and search a database.	**INFORMATION TECHNOLOGY** **Creating formula in Excel** Pupils learn how to organise data and make calculations using the application Microsoft Excel.
Autumn 2	**COMPUTER SCIENCE** **Introduction to Scratch** Pupils learn how to program sprites using a range of blocks to add animation, sound and other effects	**COMPUTER SCIENCE** **Repetition and forever loops** Pupils learn to use repetition and loops when coding.	**COMPUTER SCIENCE** **Using variables** Pupils identify different types of variables, what conditionals are and understand how variables are used in computer programming.	**COMPUTER SCIENCE** **Edublocks - Introduction to Python** Pupils learn how block-based programming compares to written code. Pupils will be introduced to Python as a text-based method of programming.
Spring 1	**COMPUTER SCIENCE** **Prediction and debugging** Pupils learn how to use prediction when coding to test and debug written programs.	**COMPUTER SCIENCE** **Designing a game** Pupils use their knowledge of Scratch to create a Formula One style game.	**COMPUTER SCIENCE** **Coding using Micro:Bits** Pupils program Micro:Bit to make a variety of practical and usable devices.	**COMPUTER SCIENCE** **Programming a game** Using the application Scratch, pupils will create an interactive, playable game using conditionals, variables, and operators.
Spring 2	**INFORMATION TECHNOLOGY** **Altering media** Pupils look at the skills behind taking a good photograph and how these photos can be edited in various ways.	**INFORMATION TECHNOLOGY** **Making a special effects movie** Pupils create their own videos and apply special effects to them.	**INFORMATION TECHNOLOGY** **Stop motion animation** Pupils learn about all aspects of stop frame animation. They storyboard their own story before using a software package to create their own stop frame animation.	**INFORMATION TECHNOLOGY** **Creating a podcast** Pupils will produce a podcast based on a piece of writing from another curriculum area or aspect of school life.
Summer 1	**COMPUTER SCIENCE** **Inside a computer** Pupils identify the different parts of a computer and explore how computers have evolved over the last 100 years.	**DIGITAL LITERACY** **Smarter searching and online safety** Pupils gain awareness of the best ways to use a search engine and to continue to develop awareness of online dangers.	**COMPUTER SCIENCE** **The Internet and the World Wide Web** Pupils learn the difference between the WWW and the internet. They also explore what is meant by IP address.	**INFORMATION TECHNOLOGY** **HTML** Pupils will learn how to design a multi-page informational website, considering the layout, user experience and key features including home page, links and images.
Summer 2	**INFORMATION TECHNOLOGY** **Publishing online content** Pupils are introduced to graphic design, marketing, and will develop their publishing skills.	**INFORMATION TECHNOLOGY** **Pixel art** Pupils create a piece of pixel artwork using a grid format.	**INFORMATION TECHNOLOGY** **3D modelling** Children learn to design models using online CAD software.	**Social media and being safe online** Pupils will learn about the purpose of social media and different aspects of social media and how to use it safely