Computing CURRICULUM MAP

(LONG TERM PLAN FOR YEAR A and YEAR B).

Due to the changing structure of the classes and the fact that three of our classes bridge Key Stages, our long term planning is designed to ensure every child receives complete coverage of our broad and challenging curriculum throughout their learning journey. Planning on KAPOW.

Rose(R/1)	Tamarisk(2/3) Year A	Tamarisk(2/3) Year B	Socoa(4/5/6) Year A	Socoa(4/5/6) Year B
Core Concepts: communicate, connect, code and collect				
Getting started **5 lessons** Introducing children to logging in and using technology for a purpose, including creating art	**What is a computer? (Y2)** **5 lessons** Children explore exactly what a computer is, identifying and learning how inputs and outputs work, how computers are used in the wider world and designing their own computerised invention	**Algorithms and Debugging (Y2)** **(5 lessons)** Identifying problems with code using both 'unplugged' and 'plugged' systems to diagnose and correct errors in an algorithm- a process known as 'debugging'	**Collaborative Learning (Y4)** **(5 lessons)** Pupils learn about the importance of using collaborative learning tools and combine this with their digital literacy skills to create Online content.	**HTML (Y4)** **(5 lessons)** Pupils explore the language behind well known websites, while developing their understanding of how to change the core characteristics of a website using HTML and CSS
Programming Beebots **5 lessons** Using Bee Bots to navigate an area and constructing simple algorithms, through the story of The Three Little Pigs	**Word processing (Y2)** **5 lessons** Using their developing word processing skills, pupils write simple messages to friends and learn why we must be careful about who we talk to online	**International Space Station (Y2)** **(5 lessons)** Building on their understanding of how computers sense what's going on around them, children learn how this can be used in the context of keeping astronauts healthy.	**Website Design (Y4)** **(5 lessons)** Pupils design and create their own websites, considering content and style, as well as understanding the importance of working collaboratively.	**Computational Thinking (Y4)** **(5 lessons)** Through developing their understanding of the four pillars of computational thinking, children learn to identify them in different contexts
Algorithms unplugged **5 lessons** Learning how computers handle information by exploring 'unplugged' algorithms - completing tasks away from the computer	**Programming: Scratch Junior (Y2)** **(5 lessons)** Using the app 'ScratchJr', pupils programme a familiar story and an animation of an animal, make their own musical instruments and follow an algorithm to record a joke	**Stop Motion (Y2)** **(5 lessons)** To tell a story, children explore how to create an animation use stop motion technology Link to English /science/ history for animation ideas	**Search Engines (Y5)** **(5 lessons)** To enable children to quickly and accurately find information and become independent learners, they need to develop their searching skills and learn how to identify trustworthy sources.	**Mars Rover 1 (Y5)** **(5 lessons)** Pupils explore inputs and outputs as well as Binary numbers to understand how the Mars Rover transmits and receives data and how scientists are able to control it to explore another planet!
Digital Imagery **5 lessons** Taking and manipulating digital photographs, including adding images found via a search engine	**Emailing (Y3)** **(5 lessons)** Pupils learn how to send emails, including attachments and how to be responsible digital citizens	**Digital Literacy (Y3)** **(5 lessons)** Using their knowledge of video editing, children create book trailers about their favourite stories	**Music Programming (Y5)** **(5 lessons)** Composing music using code through Sonic Pi or equivalent, pupils can import samples, add drum beats and compose simple tunes culminating in a 'battle of the bands' using live loops of music	**Mars Rover 2 (Y5)** **(5 lessons)** Children learn how the Mars Rover is able to send images all the way back to Earth and experiment with online CAD software to design new tyres for it.
Introduction to data **5 lessons** Learning about what data is and how it can be represented and using these skills to show the findings of a minibeast hunt	**Journey Inside a Computer (Y3)** **(5 lessons)** Children learn about the different parts of a computer through role-play and develop their understanding of how they follow instructions	**Programming: Scratch (Y3)** **(5 lessons)** Using Scratch, with its block-based approach to coding, pupils learn to tell stories.	**Bletchley Park (Y6)** **(10 lessons)** Children learn about the history of Bletchley Park, including: key historical figures, how the first modern computers were created at as part of a WWII code breaking team and consider how computers have evolved over time.	**Big Data 1 (Y6)** **(10 lessons)** Children learn how data is collected and stored by exploring barcodes, QR codes and RFID chips, and investigate how collecting big data can be used to help people.
Rocket to the moon **5 Lessons** Appreciating the value of computers, understanding that they helped us get to the moon	**Top Trumps Databases (Y3)** **(5 lessons)** To develop their understanding of data and databases, children play with and create their own Top Trumps cards, learning how to interpret information by ordering and filtering	**Networks (Y3)** **(5 lessons)** To understand how computers communicate, children learn about networks and how they are used to share information	**Intro to Python (Y6)** **(5 lessons)** Building on their knowledge of coding from previous years, children are introduced to the text-based programming language Python, which is the language behind many apps and programs, such as dropbox.	**Big Data 2 (Y6)** **(10 lessons)** Children learn the difference between mobile data and WiFi and how data is transferred and use their understanding of big data to design their own smart school.

ONLINE SAFETY COVERED AS PART OF PSHE - 1 decision