Slingsby School Computing Curriculum Overview 2024-2025: Kapow Primary Unit Summaries

KS1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 (Children have one online safety lesson each half term)	**Computing Systems and Networks: Improving mouse skills** Knowing how to log in and navigate around a computer, developing mouse skills, learning how to drag, drop, click and control a cursor to create works of art inspired by Kandinsky and self-portraits.	**Programming 1: Algorithms unplugged** Using an unplugged approach so that algorithms, decomposition and debugging are made relatable to familiar contexts, such as dressing up and making a sandwich, while learning why instructions need to be very specific.	**Skills showcase: Rocket to the moon** Developing keyboard and mouse skills through designing, building and testing individual rockets be creating a digital list of materials, using drawing software and recording data.	**Programming 2: Bee Bots** Developing early programming skills using the Bee:Bot	**Creating Media: Digital Imagery** Using creativity and imagination to plan a miniature adventure story and capture it using developing photography skills. Learn to enhance photos using a range of editing tools as well as searching for and adding other images to a project, resulting in a high-quality photo collage showcase.	**Data Handling: Introduction to Data** Learning what data is and the different ways that it can be represented as well as developing an understanding of why data is useful, how it can be used and ways in which it can be gathered and recorded by both humans and computers.
Year 2	**Computing systems and networks 1: What is a computer?** Exploring what a computer is by identifying and learning how inputs and outputs work. Understanding how computers are used in the wider world, children design their own computerised invention.	**Programming 1: Algorithms and debugging** Developing an understanding of what algorithms are, how to program them and how they can be developed to be more efficient through a range of unplugged and plugged-in activities.	**Computing systems and networks 2: Word processing** Learning about word processing and how to stay safe online as well as developing touch-typing skills. Introducing important keyboard shortcuts, as well as simple editing tools within a word processor including: bold, italics, underline and font colour as well as how to import images.	**Programming 2: Scratch Jr** Exploring what 'blocks' do, using the app 'ScratchJr', by carrying out an informative cycle of predict>test>review. Programming a familiar story and an animation of an animal, children make their own musical instrument by creating buttons and recording sounds as well as following an algorithm to record a joke.	**Creating media: Stop motion** Storyboarding and simple animation creation using either tablet devices or devices with cameras.	**Data handling: International Space Station** Learning how astronauts survive on the ISS, including identifying necessary items, designing sensor displays, and exploring habitable planets. **Online safety** Learning about online safety, including: what happens to information posted online; how to keep things private online; who we should ask before sharing online; describing different ways to ask for, give, or deny permission online.

KS2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3/4	**Computing systems and networks 1: Networks (Y3)** Introduction to the concept of networks, learning how devices communicate. From identifying components, learn how information is shared and deepen this understanding by exploring examples of real-world networks.	**Programming: Scratch (Y3)** Learning to use loops to program an animation, a story and a game in Scratch.	**Creating media: Video trailers (Previously called 'Digital literacy') (Y3)** Storyboarding and creating a simple trailer using either iPads or devices other than iPads.	**Creating media: Website design (Y4)** Planning and creating a web page using either Google Sites or Microsoft Office 365 software.	**Programming 2: Computational thinking (Y4)** Developing the four areas of computational thinking through a range of plugged and unplugged activities.	**Data handling: Investigating weather (Y4)** Researching and storing data using spreadsheets, designing a weather station which gathers and records data.
Year 5/6	**Year 5: Programming 2: Micro:bit** Clipping blocks together in a program and predicting what will happen whilst making connections with previously used programming tools.	**Year 5: Data handling: Mars Rover 1** Identifying some of the types of data that the Mars Rover collects and explaining how the Mars Rover transmits the data back to Earth.	**Year 5: Skills Showcase: Mars Rover 2** Learning about pixels and binary, creating a pixel picture and saving a JPEG as a bitmap to understand the difference in file size as well as how pixels are used to transfer image data.	**Year 6: Computing systems and networks: Bletchley Park and the history of computers** Exploring codebreaking at Bletchley Park, historical figures in Computing, the evolution of computers, designing a computer of the future and creating an audio advert.	**Year 5: Online safety** Exploring online communication, protecting personal information with strong passwords and offering advice to combat the negative effects of online use.	**Year 6: Skills showcase: Inventing a product** Designing a new electronic product and using CAD software to design appropriate housing for it.