Years 1 and 2

	Autumn A	Spring A	Summer A	Autumn B	Spring B	Summer B
Computing Kapow Primary schemes of work	**Year 1** **Getting Started** Recognising common uses of information technology. Logging in and saving work on their own account. Knowing what to do if they have concerns about content or contact online. Understanding of how to create digital art using an online paint tool. Learning to locate where keys are on the keyboard. Developing basic mouse skills. **Programming Bee Bots** Learning how to explore and tinker with hardware to find out how it works. Constructing a series of instructions into a simple algorithm. Applying computing concepts to real world situation in an unplugged activity.	**Year 1** **Algorithms Unplugged** Understanding how to create algorithms. Learning that computers need information to be presented in a simple and clear way. Understanding how to break a computational thinking problem into smaller parts in order to solve it. **Digital Imagery** Using technology purposefully to create, organise, store, manipulate and retrieve digital content. Knowing what to do if they have concerns about content or contact online. Using cameras or tablets to take photos. Using logical reasoning to predict the behaviour of simple programs.	**Year 1** **Rocket To The Moon** Using technology purposefully to create, organise, store, manipulate and retrieve digital content. Selecting software appropriately. **Online Safety** Understanding that they need to be kind on the internet, as they would in real life Discovering which devices connect to the internet Understanding some tips for staying safe and why this is important	**Year 2** **What Is A Computer** Learning about inputs and outputs and how they are used in algorithms. Understanding what a computer is and the role of individual components. **Word Processing** Using word processing software to type and reformat text. Understanding the importance of staying safe online.	**Year 2** **Programming Scratch Jr.** Creating and debugging simple programs. Using logical reasoning to predict the behaviour of simple programs. Understanding what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Using technology purposefully to create, organise, store, manipulate and retrieve digital content. **Algorithms And Debugging** Creating and debugging simple programs. Using logical reasoning to predict the behaviour of simple programs. Understanding what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	**Year 2** **Stop Motion** Using technology purposefully to create, organise, store, manipulate and retrieve digital content. Understanding how to use tablets or computers to take photos. **Online Safety** Identifying how to keep personal information private. Using technology respectfully by asking for permission before sharing about others online.

Years 3 and 4

	Autumn A	Spring A	Summer A	Autumn B	Spring B	Summer B
Computing Kapow Primary schemes of work	**Year 3** **Emailing** Learn about cyberbullying and fake emails. Understanding the purpose of emails. **Journey Inside A Computer** Understanding what different components of a computer do. Understanding that programs execute by following precise and unambiguous instructions.	**Year 3** **Digital Literacy** Using technology purposefully to create, organise, store, manipulate and retrieve digital content, including searching for relevant information. **Programming Scratch** Using logical reasoning to explain how simple algorithms work. Designing, writing and debugging programs that accomplish specific goals, including controlling or simulating physical systems. Solving problems by decomposing them into smaller parts. Using sequence, selection, and repetition in programs. Working with variables and various forms of input and output.	**Year 3** **Networks And The Internet** Identifying network components and understand how they are used to connect to the internet and how data is transferred. Understanding computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration. **Online Safety** Learn to distinguish between facts, opinions and beliefs on the internet Learn how to deal with upsetting online content Learn about how to protect our personal information using privacy settings and how to be discerning about what information we share and who with	**Year 4** **Collaborative Learning** Selecting using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals. Understanding opportunities offered by the World Wide Web for communication and collaboration. **Further Coding With Scratch** Using logical reasoning to explain how simple algorithms work. Designing, writing and debugging programs that accomplish specific goals, including controlling or simulating physical systems. Solving problems by decomposing them into smaller parts. Using sequence, selection and repetition in programs. Working with variables and various forms of input and output.	**Year 4** **Website Design** Selecting using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals. Understanding opportunities offered by the World Wide Web for communication and collaboration. **Investigating Weather** Understanding why some sources are more trustworthy than others. Understanding the role of inputs and outputs in computerised devices	**Year 4** **Computational Thinking** Understand what decomposition is and how it facilitates problem solving. Designing, writing and debugging programs that accomplish specific goals. Understand abstraction and patterns recognition. **Online Safety** Be discerning in evaluating content by learning about the techniques that companies use to advertise online. Use technology safely and responsibly by considering the risks of screen-time and technology. Using search technologies effectively, appreciating how results are selected and ranked.

Years 5 and 6

	Autumn A	Spring A	Summer A	Autumn B	Spring B	Summer B
Computing Kapow Primary schemes of work	**Year 5** **Online Safety** Understanding permissions required by apps to access personal information. Considering online judgements that people make and how they treat others online. **Micro:bit** Using block coding to program a device. To explore variables and different forms of input. Understand how external devices can be programmed by a separate computer.	**Year 5** **Search Engines** Recognising that information on the internet might not be true or correct. Know how to use keywords to quickly find accurate information. **Programming Music** Selecting using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals. Using programming language to create	**Year 5** **Mars Rover 1** Understanding computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration. Using search technologies effectively, appreciating how results are selected and ranked, and be discerning in evaluating digital content.	**Year 6** **Bletchley Park 1 And 2** Understanding the importance of secure passwords and using searching and word processing skills to create a presentation. Using programming software to understand hacking, relating this to computer cracking codes in WWII. Editing sound recordings for specific purpose. Learning about the history of computers and how they evolved over time.	**Year 6** **Big Data 1 And 2** Understanding how learning can be applied to a real world context. Selecting, using and combining a variety of software to design and create a range of programs, systems and content to collect, analyse, evaluate and present data. Understanding that computer networks provide multiple services Understanding how barcodes and QR codes work.	**Year 6** **Intro To Python** Understanding that websites can be altered by exploring the code beneath the site. Designing, writing and debugging programs that accomplish specific goals Solving problems by decomposing them into smaller parts. **Online Safety** Learning about online reputations and how to go about creating a positive one

| | | music, including use of loops. | Recognising that computers transfer data in binary and understand simple binary addition.
Stop Motion Animation
Using technology purposefully to create, organise, store, manipulate and retrieve digital content.
Understanding how to use tablets or computers to take photos.
Consider sequence and selection of frames when editing work. | | Selecting, using and combining a variety of software to design and create a range of programs, systems and content to collect, analyse, evaluate and present data. | Being aware of the threats that face us online such as scammers and phishing emails and how to identify them |