YEAR 5 5.1 - Create and Search a Database

Computing Area	Information Communication Technology
National Curriculum Strands	• Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
Skills Progression Points	• Use a spreadsheet and database to collect, record and evaluate data.
Hardware	Laptops/Desktop PC/iPads
Software/App	MS Excel/Google Sheets/Numbers
Unit Objective	Be able to create and search a database
Unit Vocabulary	Database, information, record, field, retrieval, search, keywords, ascending, descending

YEAR 5 5.2 - Using Variables

Computing Area	Computer Science
National Curriculum Strands	• Design, write and debug programs that accomplish specific goals, including • Controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
Skills Progression Points	• Use a variable to increase programming possibilities. • Use a variable and relational operators (e.g. < = >) within a loop to stop a program. • Evaluate the effectiveness and efficiency of an algorithm while continually testing the programming of that program. • Use logical reasoning to predict and debug more complex programs including: selection, variables and operators
Hardware	Laptops/Desktop PC/iPad
Software/App	Scratch
Unit Objective	To apply what they know about Conditionals and to understand how variables are used in computer programming and to identify different types of variables.
Unit Vocabulary	Algorithm, abstraction, decomposition, logic, sequence, variable, input, output, debug, operators, loops, conditionals

YEAR 5 5.3 - Coding with Micro:Bits

Computing Area	Computer Science
National Curriculum Strands	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
Skills Progression Points	• To program a Micro:Bit to display a message or design using scroll and forever loops. • To program an event based on an input • To create a variable • To program a variable to be randomly selected • To control variables based on conditional algorithms
Hardware	Laptops/Desktop PC, Micro:Bits
Software/App	Micro:Bit Make Code, Includes Micro:Bit simulator
Unit Objective	To program a Micro:Bit to make a variety of practical and useable devices
Unit Vocabulary	Micro:Bit, block, variable, scroll, forever, conditional, algorithm

YEAR 5 5.4 - Stop Motion Animation

Computing Area	Information Technology
National Curriculum Strands	• Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
Skills Progression Points	• Select, use and combine the appropriate technology tools to create effects in media. • Select an appropriate online or offline tool to create and share ideas • Understand the dangers of building online relationships.
Hardware	Laptops/iPads
Software/App	Stop Motion Animation application (free version for iPad) Pivot Animator (https://www.j2e.com/jit5#animate is a good alternative if not available) Computers- https://cloudstopmotion.com/en-GB
Unit Objective	Pupils create a short animation.
Unit Vocabulary	Animation, Frame, Pivot Stick Figure Animator, Image,Stop Frame Animator, editing

YEAR 5 5.5 - The Internet & The World Wide Web

Computing Area	Computer Science
National Curriculum Strands	• Use technology safely respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact • Understand 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
Skills Progression Points	• Be aware of what a digital footprint is. • Know difference between Internet and the Worldwide Web • Know what a network is and be able to identify parts of a network within their school • Understand how data transfers through networks. • To understand what an IP address is.
Hardware	Laptops/Desktop PC
Software/App	Microsoft Office/Google Suite, Web Browser (Chrome/Edge/Safari/Firefox)
Unit Objective	To understand how the Internet works, how the World Wide Web works and how one relies upon the other to function
Unit Vocabulary	WAN, LAN, network, router, Wi-Fi, wireless, Local, cable, connection, binary, modem, switch, server.

YEAR 5 5.6 - 3D Modelling

Computing Area	Information Technology / Digital Literacy
National Curriculum Strands	• Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information
Skills Progression Points	• Use different online tools for different purposes. • Be able to use a variety of familiar and unfamiliar software by using a pre-existing skill set • Select, use, and combine the appropriate technology tools to create effects in media.
Hardware	Laptops/Desktop PC
Software/App	Sketchup program, Online Sketchup (need to create an account)
Unit Objective	To create a 3D model linked to their class topic
Unit Vocabulary	CAD (Computer aided design), Template, Select, Draw, Push /Pull, Orbit, Pan, Zoom, Zoom Extents, extrude, Paint bucket.