2022-23 By the end of Year 1 children should know:	**National Curriculum** Key stage 1 Pupils should be taught to: *-understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions* *-create and debug simple programs* *-use logical reasoning to predict the behaviour of simple programs* *-use technology purposefully to create, organise, store, manipulate and retrieve digital content* *-recognise common uses of information technology beyond school* *-use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.*

Information technology			
Animation: • I know how to add filters and stickers to enhance an animation of a character. • I know how to create an animation to tell a story with more than one scene. • I know how to add my own pictures to my story animation	Photography and digital art: • I know how to edit a photo with simple tools • I know how to use a paint/drawing app to create a digital image • I know how to begin to cut out an image to layer on another image.	Sound: • I know how to create a sequence of sounds (instruments, apps/software) • I know how to explore short and long sounds. • I know how to record my voice and add different effects	

Computer Science			**Digital Literacy**	**Word processing / typing / key skills**
Computational thinking: • I understand what algorithms are • I know how to write simple algorithms • I understand the sequence of algorithms is important • I know how to debug simple algorithms	Programming: • I know how to create a simple program on a digital device e.g. Bee Bot or tablet • I know how to use sequence in programs • I know how to locate and fix bugs in my program		National Online Safety	• I know how to play on a touch screen game and use computers / keyboards / mouse in role play • I know how to type letters with increasing confidence using a keyboard and tablet. • I know how to dictate short, clear sentences into a digital device

Key Vocabulary	
Animation: Filters, stickers, scene Digital Art: Edit, drawing, cut, layer, mark up, erase Sound: Sequence, instruments, short, long, effects Key skills: Space Bar, Delete, Return Key, Enter, Mouse, arrow keys, cursor, select, save	Programming: Digital, program, follow, code, bugs, fix, order Computational thinking: Algorithm, sequence, order, bug, fix, precise

2022-23 By the end of Year 2 children should know:	**National Curriculum** Key stage 1 Pupils should be taught to: *-understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions* *-create and debug simple programs* *-use logical reasoning to predict the behaviour of simple programs* *-use technology purposefully to create, organise, store, manipulate and retrieve digital content* *-recognise common uses of information technology beyond school* *-use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.*

Information technology			
Animation: • I know how to add filters and stickers to enhance an animation of a character. • I know how to create an animation to tell a story with more than one scene. • I know how to add my own pictures to my story animation	Photography and digital art: • I know how to edit a photo with simple tools • I know how to use a paint/drawing app to create a digital image • I know how to begin to cut out an image to layer on another image.	Sound: • I know how to create a sequence of sounds (instruments, apps/software) • I know how to explore short and long sounds. • I know how to record my voice and add different effects	

Computer Science			**Digital Literacy**	**Word processing / typing / key skills**
Computational thinking: • I understand what algorithms are • I know how to write simple algorithms • I understand the sequence of algorithms is important • I know how to debug simple algorithms	Programming: • I know how to create a simple program on a digital device e.g. Bee Bot or tablet • I know how to use sequence in programs • I know how to locate and fix bugs in my program		National Online Safety	• I know how to play on a touch screen game and use computers / keyboards / mouse in role play • I know how to type letters with increasing confidence using a keyboard and tablet. • I know how to dictate short, clear sentences into a digital device

Key Vocabulary	
Animation: Filters, stickers, scene Digital Art: Edit, drawing, cut, layer, mark up, erase Sound: Sequence, instruments, short, long, effects Key skills: Space Bar, Delete, Return Key, Enter, Mouse, arrow keys, cursor, select, save	Programming: Digital, program, follow, code, bugs, fix, order Computational thinking: Algorithm, sequence, order, bug, fix, precise

2022-23 By the end of Year 3 children should know:	**National Curriculum** Key Stage 2 pupils should be taught to: -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 -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 -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -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 -use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Information technology			
Presentation: • I know how to create an interactive comic with sounds, formatted text and video.	Video creation (networks): ● I know how to sequence clips of mixed media in a timeline and record a voiceover		

Computer Science			**Digital Literacy**	**Word processing / typing / key skills**
Computational thinking: ● I know how to create algorithms for my programming projects ● I know how to decompose projects (such as an animation) into steps to create an algorithm ● I understand abstraction is focusing on important information	Programming: ● I know how to design a program ● I know how to create a program using a design ● I know how to create a sequence of code ● I know how to work with a variety of inputs and outputs ● I know how to evaluate my program	Computer networks: ● Understand that the computers in a school are connected together in a network ● Understand why computers are networked	National Online Safety	• I know how to edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows. I know how to use index fingers on keyboard home keys (f/j), use left fingers for a/s/d/f/g, and use right fingers for h/j/k/l • I know how to use cut, copy and paste to quickly duplicate and organise text.

Key Vocabulary	
Presentation: Project, template, layout, multimedia, format, import, media, background, audio recording, Key skills: Touch type. Edit, format, font, size, borders, shadows, duplicate, organise, undo, redo, autocorrect, clip	Programming: Sequence, inputs, outputs, code, design, programming language, Scratch Computational thinking: Abstraction, information, relevant, pattern, same, different, complex Computer Networks: Network, server, client, LAN (Local Area Network), switch

2022-23 By the end of Year 4 children should know:	**National Curriculum** Key Stage 2 pupils should be taught to: -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 -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 -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -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 -use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Information technology			
	Video creation (networks): ● I know how to use confidently use green screen adding animated backgrounds.		

Computer Science			**Digital Literacy**	**Word processing / typing / key skills**
Computational thinking: ● I know how to create algorithms for my programming projects ● I know how to decompose projects (such as an animation) into steps to create an algorithm ● I know how to use abstraction to focus on what's important in my design ● I know how to write more precise algorithms for use when programming	Programming: ● I know how to design a program ● I know how to create a program using a design ● I know how to create a sequence of code ● I know how to work with a variety of inputs and outputs ● I know how to evaluate my program ● I know how to use repetition in programs ● I know how to use simple selection in programs ● I know how to use logical reasoning to systematically detect and correct errors in programs	Computer networks: ● Understand the Internet is a worldwide network ● Understand how web pages are viewed across the Internet ● Understand the difference between the Internet and the world wide web	National Online Safety	• I know how to combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets. • I know how to confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text • I know how to use font sizes appropriately for audience and purpose. Use spell check and thesaurus including through Siri and other AI technology

Key Vocabulary	
Key skills: Group, crop, source, object, posters, documents, eBooks, scripts, leaflets. CTRL, spell check, thesaurus, record	Programming: Sequence, inputs, outputs, code, design, programming language, Scratch Computational thinking: Abstraction, information, relevant, pattern, same, different, complex Computer Networks: Internet, router, data, web page, submarine cable

2022-23 By the end of Year 5 children should know:	**National Curriculum** Key Stage 2 pupils should be taught to: -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 -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 -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -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 -use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Information technology			
Photography and digital art (networks): ● I know how to enhance digital photos and images using crop, brightness and resize tools	Presentation (networks): ● I know how to create and export an interactive presentation including a variety of media, animations, transitions and other effects.		

Computer Science			**Digital Literacy**	**Word processing / typing / key skills**
Computational thinking: ● I know how to create algorithms for my programming projects ● I know how to decompose projects (such as an animation) into steps to create an algorithm ● I know how to use abstraction to focus on what's important in my design ● I know how to write more precise algorithms for use when programming	Programming: ● I know how to design a program ● I know how to create a program using a design ● I know how to create a sequence of code ● I know how to work with a variety of inputs and outputs ● I know how to evaluate my program ● I know how to use repetition in programs ● I know how to use simple selection in programs ● I know how to use logical reasoning to systematically detect and correct errors in programs	Computer networks: ● Understand the Internet is a worldwide network ● Understand how web pages are viewed across the Internet ● Understand the difference between the Internet and the world wide web ● Understand that web spiders index the web for search engines ● Appreciate how pages are ranked in a search engine	National Online Safety	• I know how to apply other useful effects to my documents such as hyperlinks. • I know how to import sounds to accompany and enhance the text in my document. • I know how to organise and reorganise text on screen to suit a purpose

Key Vocabulary	
Key skills: Import, export, hyperlinks, animate, build in, build out, italics, bold, arrange, bullets	Programming: Sequence, inputs, outputs, code, design, programming language, Scratch Computational thinking: Abstraction, information, relevant, pattern, same, different, complex Computer Networks: Internet, router, data, web page, submarine cable

2022-23 By the end of Year 6 children should know:	**National Curriculum** Key Stage 2 pupils should be taught to: -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 -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 -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -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 -use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Information technology			
Photography and digital art (networks): ● I know how to enhance digital photos and images using crop, brightness and resize tools	Presentation (networks): ● I know how to create and export an interactive presentation including a variety of media, animations, transitions and other effects.	Data handling: ● I can use simple formulae to solve calculations including =sum ● I can edit and format difference cells in a spreadsheet. ● I can write spreadsheet formula to solve more challenging maths problems.	

Computer Science			**Digital Literacy**	**Word processing / typing / key skills**
Computational thinking: ● I know how to create algorithms for my programming projects ● I know how to decompose projects (such as an animation) into steps to create an algorithm ● I know how to use abstraction to focus on what's important in my design ● I know how to write more precise algorithms for use when programming	Programming: ● I know how to design a program ● I know how to create a program using a design ● I know how to create a sequence of code ● I know how to work with a variety of inputs and outputs ● I know how to evaluate my program ● I know how to use repetition in programs ● I know how to use simple selection in programs ● I know how to use logical reasoning to systematically detect and correct errors in programs	Computer networks: ● Understand the Internet is a worldwide network ● Understand how web pages are viewed across the Internet ● Understand the difference between the Internet and the world wide web ● Understand that web spiders index the web for search engines ● Appreciate how pages are ranked in a search engine	National Online Safety	• I know how to confidently choose the best application to demonstrate my learning. • I know how to format text to suit a purpose. • I know how to publish my documents online regularly and discuss the audience and purpose of my content.

Key Vocabulary	
Key skills: Alignment, application, tabs, toolbar, build order, layout, shift key, PDF, columns, graphics, Data Handling: Range, =, fill, conditional formatting,	Programming: Sequence, inputs, outputs, code, design, programming language, Scratch Computational thinking: Abstraction, information, relevant, pattern, same, different, complex Computer Networks: Internet, router, data, web page, submarine cable