Computing Long-Term Plan

Year R/1 Nightingales				**Tech/resources**	**Evidence**	**EYFS links**
Autumn 1	**Online Safety and Sequencing**	**Keychain Computing Ra e-Safety and Sequencing**		Keychain Slides	Screenshots and formative assessment	• Show resilience and perseverance in the face of a challenge. • Know and talk about the different factors that support their overall health and wellbeing: - sensible amounts of 'screen time'.
Autumn 2	**Computing systems and networks**	**NCCE Technology Around Us**		NCCE Year 1 Slides	Photos of computer yse	
Spring 1	**Sorting Algorithms Coding** **Blocks**	**Keychain Computing Rb Spring Term**		Keychain Slides, Blocks, Objects https://www.keychaincomputing.co.uk/coloured-counter-drop	Screenshots and formative assessment	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explore how things work.

Spring 2	**Creating Media**	**NCCE Digital Paintings**		NCCE Year 1 Slides	Printed work	
Summer 1	**Using technology purposefully** **Programming**	**Keychain Computing Rc Summer Term**		Beebots/Floor Bots Martha Monkey e-Book	Screenshots and formative assessment	• Explore how things work. • Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
Summer 2	**Moving a robot**	**NCCE Moving a robot**		Beebots	Photos, maps	

Computing Long-Term Plan

Year 1/2/3 Penguins				**Tech/resources**	**Evidence**	**NC links**
Autumn 1	**Computing systems and Networks (Year 2)**	**IT around us**			Class brainstorm and formative assessment	● Recognise common uses of information technology beyond school
Autumn 2	**Creating Media (Year 2)**	**Digital Photography**		Pixlr	Saved edited images and formative assessment	● Use technology purposefully to create, organise, store, manipulate, and retrieve digital content
Spring 1	**Programming A (Year 2)**	**Moving a Robot**		Beebots	Formative assessment, photographs and examples of chn's planned routes	● 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
Spring 2	**Data and Information (Year 2)**	**Pictograms**		Laptops	Pictograms, summative assessment	Computing ● use technology purposefully to create, organise, store, manipulate and retrieve digital content ● 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 Maths Building on Year 1 number and place value: ● Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: 'equal to', 'more than', 'less than' ('fewer'), 'most', 'least' Year 2

						● interpret and construct simple pictograms, tally charts, block diagrams and simple tables ● ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ● ask and answer questions about totalling and comparing categorical data
Summer 1	**Creating media (Year 2)**	**Digital music**		Musical instruments	Rubric	Computing national curriculum links ● Use technology purposefully to create, organise, store, manipulate, and retrieve digital content ● 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 Music national curriculum links ● Play tuned and untuned instruments musically ● Listen with concentration and understanding to a range of high-quality live and recorded music ● Experiment with, create, select, and combine sounds using the interrelated dimensions of music
Summer 2	**Programming B (Year 2)**	**Programming Quizzes**		iPads/Laptops Scratch	Rubric	Computing • 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 • Use logical reasoning to predict the behaviour of simple programs

						Maths Measure • sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] Geometry - position and direction • describe position, direction and movement, including whole, half, quarter and three-quarter turns

Computing Long-Term Plan

Year 3&4 Flamingos				**Tech/ resources**	**Evidence**	**Assessment**	**NC links**
Autumn 1	**Computing systems and Networks (Year 3)**	**The Internet**		Chrome Music lab	Worksheets and screenshots/ saved websites	Summative assessment quiz	● 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
Autumn 2	**Computing systems and Networks (Year 4)**	**The Internet**		Chrome Music lab	Worksheets and screenshots/ saved websites	Summative assessment quiz	● 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
Spring 1	**Creating Media (Year 3)**	**Photo editing**		getpaint.net	Edited images	Rubric	● Use search technologies effectively ● 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
Spring 2	**Creating Media** **(Year 4)**	**Audio editing**		Microphones, headphones and Audacity	Podcasts	Rubric	" ● 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

Summer 1	**Programming A** **(Year 3)**	**Sequence in Music**		Scratch scratch.mit.edu	Saved work into class folder on server	Rubric	"● Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
Summer 2	**Programming A** **(Year 4)**	**Repetition in shapes**			Formative assessments and screenshots of coding	Summative assessment quiz	● 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

Computing Long-Term Plan

Year 4/5 Goldfinches				Tech/resources	Evidence	Assessment	NC links
Autumn 1	**Computing systems and Networks (Year 4)**	**The Internet**		Chrome Music lab	Worksheets and screenshots/ saved websites	Summative assessment quiz	● 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
Autumn 2	**Computing systems and Networks (Year 5)**	**Sharing Information**		PP or google slides and Scratch	Slides and scratch project/ screenshots	Summative Assessment quiz	" ● Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

Spring 1	**Creating Media (Year 4)**	**Audio editing**		Microphones, headphones and Audacity	Podcasts	Rubric	" ● 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
Spring 2	**Creating Media (Year 5)**	**Vector Drawing**		google drawings app- can use publisher or pp if not	Images/files saved onto server or screenshots from ipads	Rubric	● 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.

Summer 1	**Programming A (Year 4)**	**Repetition in shapes**			Formative assessments and screenshots of coding	Summative assessment quiz	" ● Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
Summer 2	**Programming A (Year 5)**	**Selection in physical computing**		Microbit (in school)	Photos, pupil comments and designs	Rubric	● 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

Computing Long-Term Plan
Year 6

				Tech/ resources	Evidence	Assessment	NC links
Autumn 1	**Computing systems and Networks**	**Communication**		Laptops	web page design	Summative assessment quiz	● Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts ● 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 ● 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
Autumn 2	**Creating Media**	**Web page creation**		Laptops	web page design	Rubric	Computing ● 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. Education for a Connected World links Copyright and ownership

							• I can demonstrate the use of search tools to find and access online content which can be reused by others. English ● Writing composition: Identifying the audience for and purpose of the writing, selecting the appropriate form, and using other similar writing as models for their own.
Spring 1	**Programming**	**Variables In Games**		Scratch	Working games	Digital summative assessment	Computing ● 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 ● 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
Spring 2	**Data and information**	**Spreadsheets**		Google sheets or excel	Saved spreadsheets on server	Summative assessment quiz	● 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

Summer 1	**Programming B**	**Sensing**		Micro:bits or makecode.microbit.org micro:bit emulator	Photos if using physical micro:bits and saved project URL	Rubric	● 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
Summer 2	**Programmming (Transition to Year 7)**	**Microbits Unit**		Micro:bits or makecode.microbit.org micro:bit emulator	Photos if using physical micro:bits and saved project URL	Photos	Key Stage 2: ● 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 Key Stage 3 ● Create, reuse, revise, and repurpose digital artefacts for a given audience, with attention to trustworthiness, design, and usability ● Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures; design and develop modular programs that use procedures or functions.

Computing Long-Term Plan