Computing Curriculum Overview

Term	Autumn	Spring	Summer
Strand	**Computing systems and networks**	**Programming**	**Creating media**
Year 1	Technology around us	Moving a robot	Digital writing
Year 2	Information technology around us	Robot algorithms	Making music
Year 3	Connecting computers	Sequencing sounds	Desktop publishing
Year 4	The internet	Repetition in games	Photo editing
Year 5	Selection in physical computing	Selection in quizzes	Video production
Year 6	Internet communication	Variables in games	**Data and Information-** Introduction to spreadsheets

Computing Unit Summaries

Term	Autumn	Spring	Summer
Strand	**Computing systems and networks**	**Programming**	**Creating media**
Year 1	Technology around us Recognising technology in school and using it responsibly.	Moving a robot Writing short algorithms and programs for floor robots, and predicting program outcomes.	Digital writing Using a computer to create and format text, before comparing to writing non-digitally.
Year 2	Information technology around us Identifying IT and how its responsible use improves our world in school and beyond.	Robot algorithms Creating and debugging programs, and using logical reasoning to make predictions.	Making music Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.
Year 3	Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	Sequencing sounds Creating sequences in a block-based programming language to make music.	Desktop publishing Creating documents by modifying text, images, and page layouts for a specified purpose.
Year 4	The internet Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	Repetition in games Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	Photo editing Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.
Year 5	Selection in physical computing Exploring conditions and selection using a programmable microcontroller.	Selection in quizzes Exploring selection in programming to design and code an interactive quiz.	Video production Planning, capturing, and editing video to produce a short film.
Year 6	Internet communication Identifying and exploring how data is transferred and information is shared online.	Variables in games Exploring variables when designing and coding a game.	**Data and Information-** Introduction to spreadsheets Answering questions by using spreadsheets to organise and calculate data.

National Curriculum Coverage Key Stage 1

	1.1	1.2	1.3	1.4	1.5	1.6
	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
Year 1	Programming- Moving a robot	Programming- Moving a robot	Programming- Moving a robot	Computing systems and networks- Technology around us Creating media- Digital writing	Computing systems and networks- Technology around us Programming- Moving a robot	Computing systems and networks- Technology around us Creating media- Digital writing
Year 2	Programming- Robot algorithms	Programming- Robot algorithms	Programming- Robot algorithms	Computing systems and networks- IT around us Programming-Robot algorithms Creating media- Making music	Computing systems and networks- IT around us	Computing systems and networks- IT around us

National Curriculum Coverage Key Stage 2

	2.1	2.2	2.3	2.4	2.5	2.6	2.7
	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
Year 3	Programming -Sequencing sounds	Computing systems and networks- Connecting computers Programming- Sequencing sounds	Programming -Sequencing sounds	Computing systems and networks- Connecting computers	Creating media- Desktop publishing	Computing systems and networks- Connecting computers Programming- Sequencing sounds Creating media- Desktop publishing	
Year 4	Programming - Repetition in games	Programming- Repetition in games	Programming - Repetition in games	Computing systems and networks- The Internet	Computing systems and networks- The Internet Creating media- Photo editing	Computing systems and networks- The Internet Creating media- Photo editing	Computing systems and networks- The Internet Creating media- Photo editing

Year 5	Programming - Selection in physical computing Programming - Selection in quizzes	Programming- Selection in physical computing Programming- Selection in quizzes	Programming - Selection in physical computing Programming - Selection in quizzes		Creating media- Video editing	Programming- Selection in physical computing Programming- Selection in quizzes Creating media- Video editing	Creating media- Video editing
Year 6	Computing systems and networks- Internet communication Programming - Variables in games	Programming- Variables in games	Programming - Variables in games	Computing systems and networks- Internet communication	Computing systems and networks- Internet communication	Computing systems and networks- Internet communication Programming- Variables in games Data and information- Introduction to spreadsheets	Computing systems and networks- Internet communication

Software and hardware overview

Year 1	**Laptop or desktop**	**iPad/tablet**	**Resource**
Computing systems and networks-Technology around us	✓	✓	Paintz.app MS Paint
Programming- Moving a robot			Bee bots
Creating Media- Digital writing	✓	✓	Microsoft word

Software and hardware overview

Year 2	**Laptop or desktop**	**iPad/tablet**	**Resource**
Computing systems and networks- IT around us	✓		Microsoft power point
Programming- Robot algorithms			Bee bots
Creating Media- Making music	✓	✓	Chrome music lab

Software and hardware overview

Year 3	Laptop or desktop	iPad/tablet	Resource
Computing systems and networks-Connecting computers	✓	✓	MS Paint
Programming- Sequencing sounds	✓	✓	Scratch
Creating Media- Desktop publishing	✓		Adobe express

Software and hardware overview

Year 4	**Laptop or desktop**	**iPad/tablet**	**Resource**
Computing systems and networks- The internet	✓	✓	Various websites
Programming- Repetition in games	✓	✓	Scratch
Creating Media- Photo editing	✓		Paint.NET photopea

Software and hardware overview

Year 5	**Laptop or desktop**	**iPad/tablet**	**Resource**
Programming- Selection in physical computing	✓		Crumble controller + starter kit + motor
Programming- selection in quizzes	✓		Scratch
Creating Media- Video editing	✓	✓	iMovie

Software and hardware overview

Year 6	**Laptop or desktop**	**iPad/tablet**	**Resource**
Computing systems and networks- Internet communication	✓		PowerPoint
Programming- Variables in games	✓		Scratch
Data and Information- Introduction to spreadsheets	✓	✓	Microsoft Excel