

Computing

Long-term plan

Condensed mixed-age

This version was updated on 02/10/2026
12:20

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Suggested long-term plan: Computing

Overview (All year groups)

Cycle A	Autumn	Spring	Summer
Year 1/2	Programming 2: Bee-Bots	Programming 2: MakeCode	Data handling: Introduction to data
Year 3/4	Programming: Scratch	Programming 1: Further coding with Scratch	Data handling: Exploring branching databases
Year 5/6	Programming 2: BBC micro:bit	Programming: Exploring Python	Data handling: Exploring spreadsheets
Cycle B	Autumn	Spring	Summer
Year 1/2	Computing systems: Using computers 1	Computing systems: Using computers 2	Creating media: Digital designers 3
Year 3/4	Computing systems: Connecting devices	Computing systems: Connecting networks	Creating media: Creating digital images
Year 5/6	Computing systems: Websites, search and storage	Computing systems: Understanding hardware, networks and security	Creating media: Creating a multimedia project

Suggested long-term plan: Computing

Overview - Key stage 1

Year 1/2

Unit 1	<u>Programming 2: Bee-Bots</u> 5 lessons Exploring commands, instructions and errors through programming a Bee-Bot and learning how sequences control movement. Pupils practise debugging and apply logical thinking to predict, test and improve simple programs.	Unit 2	<u>Programming 2: MakeCode</u> 5 lessons Exploring how to use 'MakeCode' by investigating what different programming blocks do and how they control outcomes. Pupils apply their understanding by planning, building and testing their own program.
Unit 3	<u>Data handling: Introduction to data</u> 0 lessons Exploring data by collecting, organising and presenting information using digital tools. Pupils learn how to group data, create simple digital charts and pictograms and evaluate how effectively information has been represented and communicated.		

Suggested long-term plan: Computing

Overview - Lower key stage 2

Year 3/4

Unit 1	<u>Programming: Scratch</u> 5 lessons Investigating programming through Scratch by creating animations and learning key coding concepts. Pupils apply their understanding by testing, debugging and evaluating their work to improve and refine digital projects.	Unit 2	<u>Programming 1: Further coding with Scratch</u> 5 lessons Designing and programming a game using variables, sensors and 'if' statements to control outcomes and interactions. Pupils debug and evaluate their projects to improve functionality, refine gameplay and develop more effective game designs.
Unit 3	<u>Data handling: Exploring branching databases</u> 0 lessons Exploring how branching databases organise and classify information using yes/no questions. Pupils plan, create and test their own digital branching databases and evaluate how effectively they identify and classify information.		

Suggested long-term plan: Computing

Overview - Upper key stage 2

Year 5/6

Unit 1	<u>Programming 2: BBC micro:bit</u> 5 lessons Investigating how to program the BBC micro:bit by creating interactive projects using sensors, variables and conditional statements. Pupils experiment with variables, apply conditional statements and develop an understanding of how coding brings digital devices to life.	Unit 2	<u>Programming: Exploring Python</u> 5 lessons Exploring text-based programming with Python, pupils learn how syntax and nested loops control program outcomes and develop their ability to identify and fix syntax and logic errors through careful debugging.
Unit 3	<u>Data handling: Exploring spreadsheets</u> 0 lessons Using spreadsheets to organise, analyse and present data. Pupils learn how to enter and format information, use simple formulas and create charts, before evaluating how effectively spreadsheets can answer questions and solve real-world problems.		

Suggested long-term plan: Computing

Overview - Key stage 1

Year 1/2

Unit 1	<u>Computing systems: Using computers 1</u> 5 lessons Exploring different types of computers, their common parts and how they are used in everyday life, while developing an understanding of logging in, using software and saving digital work. Pupils apply their understanding by creating and saving files, using usernames and passwords, and investigating how digital devices connect and share information through the internet.	Unit 2	<u>Computing systems: Using computers 2</u> 5 lessons Exploring how computers use inputs, programs and outputs to make things happen, pupils identify common input and output devices and recognise how computers are used in everyday life. They also learn how to log in and out safely and save and organise files so they can find their work again later.
Unit 3	<u>Creating media: Digital designers 3</u> 0 lessons Creating digital content for a specific purpose and audience by combining text and images effectively. Pupils learn how layout, size and colour can improve communication, organise content on a page and develop their editing skills by reviewing and improving their work.		

Suggested long-term plan: Computing

Overview - Lower key stage 2

Year 3/4

Unit 1	<u>Computing systems: Connecting devices</u> 5 lessons Exploring computers, their components and peripherals, including how devices connect and work together in networks to share information. Pupils apply their understanding by identifying suitable technology for different tasks, connecting devices and using a school network to access and share information.	Unit 2	<u>Computing systems: Connecting networks</u> 5 lessons Exploring how local networks connect to the internet and how people use the World Wide Web. Pupils learn about routers, servers, websites and search engines before discovering how networks enable communication and collaboration.
Unit 3	<u>Creating media: Creating digital images</u> 0 lessons Editing digital images by capturing, enhancing and modifying photographs using a range of digital tools, including simple AI features. Pupils learn how images can be improved for a purpose and explore how automated tools can support the editing process.		

Suggested long-term plan: Computing

Overview - Upper key stage 2

Year 5/6

Unit 1	<u>Computing systems: Websites, search and storage</u> 5 lessons Explore how the internet and digital systems help us access, store and share information.	Unit 2	<u>Computing systems: Understanding hardware, networks and security</u> 5 lessons Exploring how computer systems work, focusing on hardware, networks, data storage, data packets, troubleshooting and security. Pupils develop their understanding of how information travels across networks, solve simple hardware and network problems and explore how security measures help protect accounts and information.
Unit 3	<u>Creating media: Creating a multimedia project</u> 0 lessons Bringing together creating media skills developed throughout primary school, pupils plan and create a multimedia project. They combine text, images, audio and video to communicate information for a specific audience, evaluating and refining their work to improve its effectiveness.		