

Computing Progression Map: Year 1 – 6

Children begin by exploring and using technology in Year 1. They then learn to create digital content, understand how computers and networks work, develop increasingly sophisticated programming skills, manage and analyse data, and, by Year 6, apply their knowledge to create complex digital solutions such as websites, games, spreadsheets, and physical computing projects. Practical examples at each stage ensure that new learning builds directly on previous experiences and prepares pupils for the next stage of the Computing curriculum and KS3.

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1 Computer Systems & Networks	Technology Around Us Children learn to use computers and simple technology safely.	IT Around Us Children understand that IT helps people in everyday life.	Connecting Computers Children learn how devices are connected.	The Internet Children discover how the internet works and how to use it safely.	Systems and Searching Children learn how search engines and computer systems work.	Communication Children understand how information travels across networks.
Progression	Use technology.	Understand technology.	Connect technology.	Explore the internet.	Search and use systems.	Understand digital communication.
Autumn 2 Creating Media	Digital Painting Create simple digital pictures.	Digital Photography	Stop Frame Animation	Audio Production Record and edit sounds.	Video Production Plan and make videos.	Web Page Creation Design and publish websites.

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Take and improve photographs.	Create moving pictures.			
Progression	Draw digitally.	Capture images.	Make animations.	Create audio.	Produce videos.	Create websites.
Spring 1	Moving a Robot	Robot Algorithms	Sequencing Sounds	Repetition in Shapes	Selection in Physical Computing	Variables in Games
Programming	Give simple instructions to move a robot.	Create and improve algorithms.	Use Scratch to create sequences.	Use loops to repeat commands.	Use conditions to make choices.	Store information and make games more complex.
Progression	Follow instructions.	Design instructions.	Sequence commands.	Repeat commands.	Make decisions.	Store and use information.
Spring 2	Grouping Data	Pictograms	Branching Databases	Data Logging	Databases	Spreadsheets
Data & Information	Sort and organise objects.	Create charts from data.	Organise information using questions.	Collect and analyse data.	Search and compare information.	Use formulas and calculations.
Progression	Sort data.	Present data.	Organise data.	Collect data.	Search data.	Calculate and analyse data.

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Summer 1 Creating Media	Digital Writing Type and edit text.	Digital Music Create digital music and rhythms.	Desktop Publishing Combine text and pictures.	Photo Editing Edit and improve images.	Vector Drawing Create scalable digital artwork.	3D Modelling Design and build 3D objects.
Progression	Create text.	Create sound.	Design pages.	Edit images.	Create graphics.	Design 3D products.
Summer 2 Programming	Programming Animations Create simple animations.	Programming Quizzes Create interactive quizzes.	Events and Actions Build interactive Scratch projects.	Repetition in Games Create games using loops.	Selection in Quizzes Create quizzes with decisions.	Sensing Movement Program physical devices using sensors.
Progression	Create animations.	Create interactive programs.	Build projects.	Program games.	Add decision making.	Control real-world devices.

Autumn 1: Computer Systems and Networks

Year	Topic	What children learn	Example Activity	Progression	Links to
y1	Technology Around Us	Children recognise technology and learn to use a computer safely.	Use a mouse to draw a picture and log in with support.	Learn basic computer skills.	Y2 IT Around Us
y2	IT Around Us	Children understand where IT is used in everyday life.	Identify IT used in a supermarket or hospital.	Understand the purpose of technology.	Y3 Connecting Computers
y3	Connecting Computers	Children learn that computers connect through networks.	Find devices connected to the school network.	Understand computer connections.	Y4 Internet
y4	The Internet	Children learn how websites work and why information should be checked.	Compare two websites to decide which is trustworthy.	Develop critical thinking online.	Y5 Systems & Searching
y5	Systems and Searching	Children learn how search engines find information.	Compare search results using different keywords.	Understand digital systems.	Y6 Communication
y6	Communication	Children understand how information travels across networks.	Follow the journey of an email from sender to receiver.	Apply network knowledge.	KS3

Journey:

Use a computer → Understand IT → Connect devices → Explore the internet → Search information → Understand communication.

Autumn 2: Creating Media

Year	Topic	What children learn	Example Activity	Progression	Links to
Y1	Digital Painting	Create pictures using digital tools.	Paint a self-portrait.	Create digital art.	Y2 Photography
Y2	Digital Photography	Take and improve photos.	Photograph playground equipment.	Capture digital images.	Y3 Animation
Y3	Stop Frame Animation	Create animations using photos.	Make a toy dinosaur walk.	Sequence images.	Y4 Audio
Y4	Audio Production	Record and edit sound.	Create a class podcast.	Produce audio.	Y5 Video
Y5	Video Production	Plan and edit videos.	Film a science experiment.	Combine media skills.	Y6 Web Design
Y6	Web Page Creation	Design websites.	Create a school information webpage.	Publish digital content.	KS3

Spring 1: Programming

Year	Topic	What children learn	Example Activity	Progression	Links to
Y1	Moving a Robot	Give simple instructions.	Program Bee-Bot to reach a flower.	Follow commands.	Y2 Algorithms
Y2	Robot Algorithms	Create and debug instructions.	Find and fix mistakes in Bee-Bot routes.	Improve algorithms.	Y3 Scratch
Y3	Sequencing Sounds	Program in Scratch.	Make a cat play a drum sound.	Build programs.	Y4 Loops
Y4	Repetition in Shapes	Use loops.	Draw a square using repeat commands.	Simplify code.	Y5 Selection
Y5	Selection	Use if/then decisions.	Create traffic lights that change colour.	Programs make choices.	Y6 Variables
Y6	Variables in Games	Store information in programs.	Create a game with a score counter.	Complex programming.	KS3

Journey:

Bee-Bot → Algorithms → Scratch → Loops → Decisions → Variables.

Spring 2: Data and Information

Year	Topic	What children learn	Example Activity	Progression	Links to
Y1	Grouping Data	Sort objects.	Sort animals by colour.	Organise information.	Y2 Pictograms
Y2	Pictograms	Create charts.	Favourite fruit survey.	Present information.	Y3 Databases
Y3	Branching Databases	Classify using questions.	Identify leaves using yes/no questions.	Organise data logically.	Y4 Data Logging
Y4	Data Logging	Collect data.	Measure classroom temperature.	Analyse data.	Y5 Databases
Y5	Databases	Search information.	Search a library database.	Manage larger data.	Y6 Spreadsheets
Y6	Spreadsheets	Use formulas.	Plan a class party budget.	Solve problems with data.	KS3

Summer 1: Creating Media

Year	Topic	Example Activity	Progression
Y1	Digital Writing	Type a sentence about themselves.	Learn keyboard skills.
Y2	Digital Music	Create a rhythm pattern.	Create digital sounds.
Y3	Desktop Publishing	Design a poster.	Combine text and images.
Y4	Photo Editing	Improve a photograph.	Edit digital media.
Y5	Vector Drawing	Design a logo.	Create digital graphics.
Y6	3D Modelling	Design a keyring or name badge.	Create 3D products.

Journey: Write → Compose → Publish → Edit → Design → Model.

Summer 2: Programming

Year	Topic	Example Activity	Progression
Y1	Programming Animations	Make a fish swim across the screen.	Create movement.
Y2	Programming Quizzes	Create a maths quiz.	Add interaction.
Y3	Events and Actions	Create a maze game.	Use events.
Y4	Repetition in Games	Make a sprite move continuously.	Use loops in games.
Y5	Selection in Quizzes	Make a quiz with correct and incorrect answers.	Use conditions.
Y6	Sensing Movement	Create a step counter using a micro:bit.	Use sensors and inputs.

Journey: Animate → Interact → Create → Repeat → Decide → Sense.

Whole School Computing Journey with Examples

Year	Big Idea	Example
Year 1	Explore technology.	Use a Bee-Bot and draw on a computer.
Year 2	Create digital work.	Take photographs and make quizzes.
Year 3	Connect and program.	Build Scratch projects and animations.
Year 4	Understand and improve.	Create podcasts and use loops.
Year 5	Solve problems.	Make videos and programs with decisions.
Year 6	Create real-world digital solutions.	Build websites, spreadsheets, games, and micro:bit projects.

