

KS1 Computing Overview

Year 1

Computer Systems and networks: Improving mouse skills

Learning how to login and navigate around a computer; developing mouse skills; learning how to drag, drop, click and control a cursor to create works of art

Online Safety

Learning how to stay safe online and how to manage feelings and emotions when someone or something has upset us.

Programming: Algorithms Unplugged

Algorithms, decomposition and debugging are made relatable to familiar contexts, following directions, learning why instructions need to be specific.

Skills Showcase: Rocket to the Moon

Developing keyboard and mouse skills through designing, building and testing. Creating a digital list of materials, using drawing software and recording data.

Programming: Programming Bee-Bots

Introducing programming through the use of a Bee-Bot and exploring its functions.

Creating Media: Digital Imagery

Taking and editing photos, searching for and adding images to a project.

Data Handling: Introduction to data

Learning what data is and the different ways it can be represented. Learning why data is useful and the ways it can be gathered and recorded.

Year 2

Computer Systems and networks: What is a computer?

Exploring what a computer is by identifying how inputs and outputs work and how computers are used in the wider world to design their own computerised invention.

Online Safety

Learning: how to keep information safe and private online; who we should ask before sharing things online and how to give, or deny permission online

Programming: Algorithms and Debugging

Developing an understanding of; what algorithms are, how to program them and how they can be developed to be more efficient, introduction of loops.

Computer Systems and networks: Word Processing

Developing touch typing skills, learning keyboard shortcuts and simple editing tools.

Programming: Scratch Jr

Exploring what 'blocks' do' by carrying out an informative cycle of predict > test > review. Programming a familiar story and make a musical instrument.

Creating Media: Stop Motion

Learning how to create simple animations from storyboarding creative ideas

Data Handling: International Space Station

Learning how data is collected, used and displayed and the scientific learning of the conditions needed for plants and humans, to survive.

KS2 Computing Overview

Year 3	Year 4	Year 5	Year 6
Computer Systems and networks: Networks	Computer Systems and networks: Collaborative learning	Computer Systems and networks: Search Engines	Computer Systems and networks: Bletchley Park
Learning what a network and how devices communicate and share information.	Learning how to work collaboratively and exploring a range of collaborative tools.	Learning about how page rank works and how to identify inaccurate information.	Discovering the history of Bletchley and learning about code breaking and password hacking. Demonstrating digital literacy skills by creating presentations.
Online Safety	Online Safety	Online Safety	Online Safety
Learning: the difference between fact, opinion and belief; and how to deal with upsetting online content. Knowing how to protect personal information online.	Searching for information and making a judgement about the probable accuracy; recognising adverts and pop-ups; understanding that technology can be distracting.	Learning about app permissions; the positive and negative aspects of online communication; that online information is not always factual; how to deal with online bullying and managing our health and wellbeing.	Learning to deal with issues online; about the impact and consequences of sharing information online; how to develop a positive online reputation; combating and dealing with online bullying and protective passwords.
Programming: Scratch	Programming: Further coding with Scratch	Programming: Programming Music	Programming: Intro to Python
Exploring the programme Scratch, following the predict > test > review cycle. Learning about 'loops' and programming an animation, story and game.	Revisiting the key features and beginning to use 'variables' in code scripts.	Building-on programming and music skills to create different sounds, beats and melodies which are put to the test with a Battle of the Bands performance!	Using the programming language 'Python' to create designs and art. Learning how to create loops and nested loops to make their code more efficient.
Computer Systems and networks: Emailing	Computer Systems and networks: Website design	Data Handling: Mars Rover 1	Data Handling: Big Data 1
Sending emails with attachments and understanding what cyberbullying is.	Learning how web pages and sites are created and how to embed media and links.	Learning about the Mars Rover, exploring how and why it transfers data including instructions, and how messages can be sent using binary code.	Identifying how barcodes and QR codes work. Learning how infrared waves are used for the transmission of data while recognising the uses of RFID.
Computer Systems and networks: Journey inside a computer	Computer Systems and networks: HTML	Creating Media: Stop Motion Animation	Creating Media: History of Computers
Assuming the role of computer parts and creating paper versions of computers to consolidate understanding of how a computer works.	Learning about the markup language behind a webpage; becoming familiar with HTML tags, changing HTML and CSS code to alter images and 'remix' a live website	Creating animations, storyboard ideas and decomposing a story into small parts before putting together to create the illusion of a moving image.	Writing, recording and editing radio plays set during WWII, learning about how computers have evolved.
Creating Media: Video Trailers	Creating Media: Computational thinking	Programming: Micro:bit	Data Handling: Big Data 2
Developing digital video skills to create trailers, with special effects and transitions.	Solving problems effectively using the four areas of abstraction, algorithm design, decomposition and pattern recognition.	Creating algorithms and programs that are used in the real world. Using the 'predict, test and evaluate' cycle to create and debug programs with specific aims.	Further developing understanding of how networks and the Internet are able to share information. Learning how big data can be used to design smart buildings.

Data Handling: Comparison cards database	Data Handling: Investigating weather	Skills showcase: Mars Rover 2	Skills showcase: Inventing a product
Learning about records, fields and data and sorting and filtering data.	Researching and storing data on spreadsheets and designing a weather station	Exploring how the Mars rover: moves, follows instructions, collects and sends data; understanding how computers work, what data is and how it is transferred.	Designing a product, pupils: evaluate, adapt and debug code to make it suitable for their needs and designing products in CAD and creating a website and video

