



Curriculum overview for parents and carers

Computing

Summary of key Computing learning for Reception to Year 6.

EYFS: Reception

Unit 1

Computing systems and networks

Using a computer

Discovering the main parts of a computer and how to use the keyboard and mouse. Learning how to log in and out.

Unit 3

Computing systems and networks

Exploring hardware

Tinkering and exploring with different computer hardware and learning to operate a camera.

Unit 2

Programming 1

All about instructions

Receiving and giving instructions and understanding the importance of precise instructions.

Unit 4

Data handling

Introduction to data

Sorting and categorising data and introducing branching databases and pictograms.

Year 1			
Unit 1	Computing systems and networks	Unit 4	Programming 2
	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.		Programming Bee-Bots Introducing programming through the use of a robot (Bee-Bot) and exploring its functions.
Unit 2	Programming 1	Unit 5	Online safety
	Algorithms unplugged Identifying where algorithms, decomposition and debugging can be found in relatable, familiar contexts. Following directions, learning why instructions need to be specific.		Online safety Y1 Learning how to stay safe online and how to manage feelings and emotions when someone or something has upset us.
Unit 3	Creating media		
	Digital imagery Taking and editing photos, searching for and adding images to a project.		

Year 2			
Unit 1	Computing systems and networks	Unit 4	Programming 2
	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. Designing a computerised invention.		MakeCode Exploring Microsoft MakeCode, planning and building a program. ScratchJr Exploring what 'blocks' do' by carrying out an informative cycle of predict > test > review. Programming a familiar story and make a musical instrument.
Unit 2	Programming 1	Unit 5	Online safety
	Algorithms and debugging Developing an understanding of; what algorithms are, how to program them and how they can be developed to be more efficient including the introduction of loops.		Online safety Y2 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.
Unit 3	Computing systems and networks		
	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.		

Year 3			
Unit 1	Computing systems and networks	Unit 4	Programming
	Networks Learning what a network is and how devices communicate and share information.		Scratch Exploring the programme Scratch, following the predict > test > review cycle. Using 'loops' and programming an animation, story and game.
Unit 2	Computing systems and networks	Unit 5	Online safety
	Journey inside a computer Assuming the role of computer parts and creating paper versions of computers to consolidate understanding of how a computer works.		Online safety Y3 Learning the difference between fact, opinion and belief and how to deal with upsetting online content. Knowing how to protect personal information online.
Unit 3	Creating media Video trailers Developing digital video skills to create trailers, with special effects and transitions.		

Year 4			
Unit 1	Computing systems and networks	Unit 4	Programming
	Collaborative learning Learning how to work collaboratively and exploring a range of collaborative tools.		Computational thinking Solving problems effectively using the four areas of abstraction, algorithm design, decomposition and pattern recognition.
Unit 2	Programming	Unit 5	Online safety
	Further coding with Scratch Revisiting the key features of the programme Scratch and beginning to use 'variables' in code scripts.		Online safety Y4 Searching for information and making a judgement about the probable accuracy; recognising adverts and pop-ups; understanding that technology can be distracting.
Unit 3	Data handling		
	Investigating weather Researching and storing data on spreadsheets and designing a weather station.		

Year 5			
Unit 1	Computing systems and networks	Unit 4	Programming
	Search engines Learning about how pagerank works and how to identify inaccurate information.		Programming music 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!
Unit 2	Data handling	Unit 5	Online safety
	Mars Rover 1 Learning about the Mars Rover, exploring how and why it transfers data including instructions, and how messages can be sent using binary code.		Online safety Y5 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.
Unit 3	Creating media		
	Stop motion animation Creating animations, storyboard ideas and decomposing a story into small parts before putting together to create the illusion of a moving image.		

Year 6			
Unit 1	Computing systems and networks	Unit 4	Creating media
	Bletchley Park and the history of computers Discovering the history of Bletchley Park, historical figures and the importance of code breaking and passwords. Designing a computer of the future and creating an audio advert for their designs.		Intro to Python Using the programming language 'Python' to create designs and art. Learning how to create loops and nested loops to make their code more efficient.
Unit 2	Data handling	Unit 5	Online safety
	Big data 1 Identifying how barcodes and QR codes work. Learning how infrared waves are used for the transmission of data while recognising the uses of RFID.		Online safety Y6 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.
Unit 3	Programming		
	AI Exploring what AI is and how it generates text, images and code. Learning about creating and refining prompts to improve AI responses while also considering the ethical implications of AI and its potential to replace human roles.		