Long Term Plan: Computing

Our scheme of work fulfils the statutory requirements outlined in the **National Curriculum (2014)**. The National Curriculum Programme of Study for Computing aims to ensure that all pupils:

We have identified these three strands which run throughout our scheme of work:

★ Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.

★ Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

Computer Science

★ Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

Information Technology

★ Are responsible, competent, confident and creative users of information and communication technology.

Digital Literacy

Our Curriculum overview document shows which of our units cover each of the National Curriculum attainment targets as well as each of the three strands. Each lesson plan references the relevant National Curriculum objectives, along with cross-curricular links to any other subjects.

Key areas

We have categorised our lessons into the five key areas below, which we return to in each year group making it clear to see prior and future learning for your pupils and how what you are teaching fits into their wider learning journey.

Computing systems and networks	Programming	Creating media	Data handling	Online safety
Identifying hardware and using software, while exploring how computers communicate and connect to one another.	Understanding that a computer operates on algorithms, and learning how to write, adapt and debug code to instruct a computer to perform set tasks.	Learning how to use various devices — record, capture and edit content such as videos, music, pictures and photographs.	Ensuring that information is collected, recorded, stored, presented and analysed in a manner that is useful and can help to solve problems.	Understanding the benefits and risks of being online — how to remain safe, keep personal information secure and recognising when to seek help in difficult situations.

Units can be completed in any order except for the numbered units which should be completed in the correct order. There are 6 units per year. Each unit is five lessons, and all lessons must be completed in order.

There are four units entitled 'Skills Showcase' (years 1, 4, 5 & 6). These units give children the chance to combine and apply skills and knowledge, from a range of the five areas above, to produce a specific outcome.

In addition to these units, we will also cover Online Safety. This will take place in February on Safer Internet Day. However, there is an Online Safety unit for each year group. As each half term is usually longer than the 5 lessons in each unit, you can use any 'spare' computing lessons to teach one of the online safety lessons if you wish to.

	EYFS	Year 1/2 (Year A)	Year 1 /2 (Year B)	Year 3	Year 4	Year 5/6 (Year A)	Year 5/6 (Year B)
Unit 1		Computing Systems and Networks	Computer Systems and Networks 1	Computer Systems and Networks 1	Computing Systems and Networks	Computing Systems and Networks	Computing Systems and Networks
	Continuous Provision	Improving Mouse Skills	What is a Computer?	Networks	Collaborative Learning	Search Engines	Bletchley Park and the History of Computers
Unit 2	Computing Systems and Networks	Programming 1	Programming 1	Programming	Programming 1	Programming 1	Computing Systems and Networks
	Using a computer	Algorithms Unplugged	Algorithms and Debugging	Programming - Scratch	Further Coding with Scratch	Programming Music	AI
Unit 3	Programming 1	Skills Showcase	Computer Systems and Networks 2	Computer Systems and Networks 2	Creating Media	Data Handling	Data Handling
	All about Instructions	Rocket to the Moon	Word Processing	Emailing	Website Design	Mars Rover 1	Big Data 1
Unit 4	Computing Systems and Networks	Programming 2	Programming 2	Computer Systems and Networks 3	Skills Showcase	Programming 2	Programming
	Exploring Hardware	Programming Bee-Bots	Programming - ScratchJr	Journey Inside a Computer	HTML	Micro:bit	Intro to Python
Unit 5	Programming 2	Creating Media	Creating Media	Creating Media	Programming 2	Creating Media	Data Handling
	Programming Bee-Bots	Digital Imagery	Stop Motion	Video Trailers	Computational Thinking	Stop Motion Animation	Big Data 2
Unit 6	Data Handling	Data Handling	Data Handling	Data Handling	Data Handling	Skills Showcase	Skills Showcase
	Introduction to Data	Introduction to Data	International Space Station	Comparison Cards Databases	Investigating Weather	Mars Rover 2	Inventing a Product