COMPUTING CURRICULUM OVERVIEW

VISION	A high-quality computing education that equips pupils to use computational thinking and creativity to understand and change the world. Navigating these changes effectively and safely requires a significant understanding of digital literacy, information technology and computer science.
INTENT	• Breadth of knowledge relating to computer science, information technology and digital literacy. • Skilful use of technology underpinned by procedural knowledge ('knowing how') and declarative knowledge ('knowing that'). • Secure understanding of how to stay safe online, recognise positive or harmful online relationships and report any concerns with confidence.
IMPLEMENTATION	The units for key stages 1 and 2 are based on a spiral curriculum and have been written to support all pupils. Each lesson is sequenced so that it builds on the learning from the previous lesson, and where appropriate, activities are scaffolded so that all pupils can succeed and thrive. Every year group learns through units within the same four themes (*Computing Systems & Networks; Programming; Data and Information; Creating Media*), which combine the ten strands of the National Centre for Computing Education's taxonomy: • Algorithms • Computer networks • Computer systems • Creating media • Data and information • Design and development • Effective use of tools • Impact of technology • Programming • Safety and security
IMPACT	We aim to make children at Wildmoor Heath digitally literate and able to join the rest of the world on its digital platform. They will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – safely. The biggest impact we want on our children is that they understand the consequences of using the internet and that they are also aware of how to keep themselves safe online. As children become more confident in their abilities in Computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature. Proficient users of technology who are able to work both independently and collaboratively and safely.

Learning Sandwich

ENQUIRY		
KNOWLEDGE & KEY AREAS	**SKILLS & CONCEPTS**	**BIG IDEAS**
Computing Systems & Networks Programming Data & Information Creating Media	Effective use of tools Impact of technology Safety & Security	Computer Science Information Technology Digital Literacy
COMMUNICATION		

COMPUTING CURRICULUM OVERVIEW

Big Ideas

Computer Science	The study of computers and computational systems. It is a broad field which includes everything from the algorithms that make up software to how software interacts with hardware to how well software is developed and designed. It teaches essential skills for the 21st century, including problem-solving, critical thinking, and collaboration. They are transferable across many subjects and disciplines.
Information Technology	The use of computers, storage, networking and other physical devices, infrastructure and processes to create, process, store, secure and exchange all forms of electronic data. It develops critical thinking skills, prepares them for the digital world, and allows for more engaging and interactive teaching methods, ultimately enhancing the overall learning process and equipping students for future careers in a technology-driven society.
Digital Literacy	The ability to use digital technologies to find, evaluate, create, and share information. It requires both technical and cognitive skills. It equips students with the essential skills to navigate the modern digital world, access information effectively, communicate online, critically evaluate digital content, and participate responsibly in society, ultimately preparing them for academic success and future careers in a technologically driven landscape.

Long Term Plan

Year	Autumn 1st	Autumn 2nd	Spring 1st	Spring 2nd	Summer 1st	Summer 2nd
Reception						
Key	**Computing Systems & Networks**	**Creating Media**	**Programming A**	**Data and Information**	**Creating Media**	**Programming B**
YEAR 1	Technology around us	Digital painting	Moving a robot	Grouping data	Digital writing	Programming animations
YEAR 2	Information Technology around us	Digital photography	Robot algorithms	Pictograms	Digital music	Programming quizzes
YEAR 3	Connecting computers	Stop-frame animation	Sequencing sounds	Branching databases	Desktop publishing	Events and actions in programs
YEAR 4	The internet	Audio production	Repetition in shapes	Data logging	Photo editing	Repetition in games
YEAR 5	Systems and searching	Video production	Selection in physical computing	Flat-file databases	Flat-file databases	Selection in quizzes
YEAR 6	Communication and collaboration	Webpage creation	Variables in games	Introduction to spreadsheets	3D modelling	Sensing movement

COMPUTING CURRICULUM OVERVIEW

	Computing Systems & Networks	Programming	Data and Information	Creating Media
Taxonomy Strands	Computer systems Computer networks	Programming Algorithms Design and development	Data and information	Creating media Design and development
	Effective use of tools			
	Impact of technology			
	Safety and security			

Progression Objectives

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing Systems & Networks	Technology around us	Information Technology around us	Connecting computers	The internet	Systems and searching	Communication and collaboration
Programming	Moving a robot Programming animations	Robot algorithms Programming quizzes	Sequencing sounds Events and actions in programs	Repetition in shapes Repetition in games	Selection in physical computing Selection in quizzes	Variables in games Sensing movement
Data & Information	Grouping data	Pictograms	Branching databases	Data logging	Flat file databases	Introduction to spreadsheets
Creating Media						
Text	Digital writing		Desktop publishing			Web page creation
Graphics	Digital painting		Digital photography	Photo editing	Introduction to vector graphics	3D modelling
Photo & Video		Digital photography			Video production	
Audio		Digital music				