



Computing

Intent

At our school we intend that children should master Computing to such an extent that they can go on to have careers within Computing and make use of Computing effectively in their everyday lives, without being completely reliant on technology. Our children will be taught to use technology responsibly and carefully, being mindful of how their behaviour, words and actions can affect others. Our children will be taught Computing in a way that ensures progression of knowledge and skills, and follows a sequence to build on previous learning. Our children will gain experience, knowledge and skills of a wide range of technology in a way that will enhance their learning opportunities, enabling them to use technology across a range of subjects to be creative and solve problems, ensuring they make progress.

Implementation:

We follow a broad and balanced Computing curriculum that builds on previous learning and provides both support and challenges for learners. We follow a Computing scheme that ensures and progression of skills and covers all aspects of the Computing curriculum. All classes will have a scheduled Computing lesson each week/all classes will not have a scheduled Computing lesson each week but will be taught Computing alongside other curriculum subjects. Children's work will be stored on Pupil shared for reference and assessment. We want to ensure that Computing is embedded in our whole school curriculum and that opportunities for enhancing learning by using technology are always taken.

Impact:

Our children enjoy and value Computing and know why they are doing things, not just how. Children will understand and appreciate the value of Computing in the context of their personal wellbeing and the technological, creative and cultural industries and their many career opportunities. Progress in Computing is demonstrated through regularly reviewing and scrutinising children's work, in accordance with our Computing assessment policy to ensure that progression of skills is



taking place. Namely through: Looking at pupils' work, especially over time as they gain skills and knowledge Observing how they perform in lessons Talking to them about what they know. The Computing curriculum will contribute to children's personal development in creativity, independence, judgement and self-reflection. This would be seen in them being able to talk confidently about their work, and sharing their work with others. Progress will be shown through outcomes and through the important record of the process leading to them.

Year EYFS/ 1	Year A 2024-2025					
	Using a computer (Computer Science)	Improving Mouse Skills (Digital Literacy)	All about instructions (Computer Science)	Algorithms Unplugged (Computer Science)	Bee Bots (Computer Science0	Online Safety (Digital Literacy)
Knowledge	• Learning how to operate a camera to take photographs of meaningful creations or moments. • Learning how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary. • Recognising and identifying familiar letters and numbers on a keyboard. • Developing basic mouse skills such as moving and clicking.	• Using a basic range of tools within graphic editing software. • Taking and editing photographs. • Developing control of the mouse through dragging, clicking and resizing of images to create different effects. • Developing understanding of different software tools. • Developing word processing skills, including altering text, copying and pasting and using keyboard shortcuts. • Using word processing software to type and reformat text. • Creating and labelling images.	Using logical reasoning to understand simple instructions and predict the outcome. • Following instructions as part of practical activities and games. • Learning to give simple instructions. • Experimenting with programming a Bee-bot/Blue- bot and learning how to give simple commands. Learning to debug instructions, with the help of an adult, when things go wrong.	• Learning to debug instructions when things go wrong. • Learning to debug an algorithm in an unplugged scenario. • Using logical thinking to explore software, predicting, testing and explaining what it does. • Using an algorithm to write a basic computer program.	• Following instructions as part of practical activities • Learning to give simple instructions. • Experimenting with programming a Bee Bot and learning how to give simple commands. • Learning to debug instructions, with the help of an adult, when things go wrong.	• To know what the internet is and how to use it safely • To understand different feelings when using the internet • To understand how to treat others, both online and in person • To understand the importance of being careful about what we post and share online
Year B 2025 – 2026						
	Using computer (Computer Science)	Exploring Hardware (Information Technology)	Rocket to the Moon (Digital Literacy)	Bee Bots (Computer Science)	Digital Imagery (Digital Literacy)	Introduction to Data (Digital Literacy))

	• Learning how to operate a camera to take photographs of meaningful creations or moments. • Learning how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary. • Recognising and identifying familiar letters and numbers on a keyboard. • Developing basic mouse skills such as moving and clicking.	• Using a simple online paint tool to create digital art. Using a simple online paint tool to create digital art.	• Learning how to operate a camera or tablet to take photos and videos. • Learning how to explore and tinker with hardware to find out how it works. • Recognising that some devices are input devices and others are output devices. • Learning where keys are located on the keyboard. • Understanding what a computer is and that it's made up of different components. • Learning how we know that technology is doing what we want it to do via its output. • Developing confidence with the keyboard and the basics of touch typing. • Recognising that buttons cause effects and that technology follows instructions. • Using greater control when taking photos with cameras, tablets or computers	• Programming a Floor robot to follow a planned route. • Using programming language to explain how a floor robot works. • Using logical thinking to explore software, predicting, testing and explaining what it does. • Using an algorithm to write a basic computer program. • Using loop blocks when programming to repeat an instruction more than once. • Learning to debug instructions when things go wrong. Learning to debug an algorithm in an unplugged scenario.	• Learning how to operate a camera or tablet to take photos and videos. • Learning how to explore and tinker with hardware to find out how it works. • Recognising that some devices are input devices and others are output devices. • Learning where keys are located on the keyboard. • Recognising that buttons cause effects and that technology follows instructions. • Using greater control when taking photos with cameras, tablets or computers.	• Understanding that technology can be used to represent data in different ways: pictograms, tables, pie charts, bar charts, block graphs etc. • Collecting and inputting data into a spreadsheet. Interpreting data from a spreadsheet. • Using representations to answer questions about data. • Using software to explore and create pictograms and branching databases
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Year 2/3	Year A 2024-25					
	What is a Computer? (Information Technology)	Algorithms and Debugging (Computer Science)	Further Coding with Scratch (Computer Science)	Word Processing (Information Technology)	Networks and the Internet (Computer Science)	Emailing (Information Technology)
Knowledge	- Recognising common uses of information technology, including beyond school. - Understanding some of the ways we can use the internet. - Learning how computers are used in the wider world.	- Learning to debug instructions when things go wrong. - Learning to debug an algorithm in an unplugged scenario. - Using logical thinking to explore software, predicting, testing and explaining what it does. - Using an algorithm to write a basic computer program.	- Using decomposition to solve a problem by finding out what code was used - Using decomposition to understand the purpose of a script of code. - Creating algorithms for a specific purpose - Coding a simple game. - Incorporating variables to make code more efficient - Remixing existing code	Developing word processing skills, including altering text, copying and pasting and using keyboard shortcuts. Using word processing software to type and reformat text.	- Learning about the purpose of routers. - Understanding the role of the key components of a network. - Understanding that websites & videos are files that are shared from one computer to another. - Learning about the role of packets. - Understanding how networks work and their purpose. - identifying the key components within a network, including whether they are wired or wireless - Recognising links between networks and the internet. - Learning how data is transferred.	- Learning to log in and out of an email account. - Writing an email including a subject, 'to' and 'from' - Sending an email with an attachment. Replying to an email.
	Year B 2025-26					
	Scratch Jr (Computer Science)	Journey inside a Computer (Computer Science)	Stop Motion (Creating Media)	Video Trailers (information Technology)	International Space Station	Comparison Databases (Information Technology)
	Understand what algorithms are; how they are implemented	Understanding what the different components of a	To understand that holding the camera still and considering angles	Using logical thinking to explore more complex software; predicting,	Logging in and out and saving work on their own account.	Using logical thinking to explore more complex software; predicting,

	as programs on digital devices; and that programs execute by following precise and unambiguous instructions • Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	computer do and how they work together. • Drawing comparisons across different types of computers • Learning how data is transferred • Explaining the purpose of an algorithm	and light are important to take good pictures. • To know that you can edit, crop and filter photographs. • To know how to search safely for images online. • To understand that an animation is made up of a sequence of photographs. • To know that small changes in my frames will create a smoother looking animation. • To understand what software creates simple animations and some of its features e.g. onion skinning.	testing and explaining what it does. • Taking photographs and recording video to tell a story. • Using software to edit and enhance their video adding music, sounds and text on screen with transitions. •	• To know that when we create something on a computer it can be more easily saved and shared than a paper version • To know some of the simple graphic design features of a piece of online software. • To know that a spreadsheet is an electronic 'table' for sorting data. • Collecting and inputting data into a spreadsheet.	testing and explaining what it does. • Understanding the vocabulary associated with databases: field, record, data • Learning about the pros and cons of digital versus paper databases • Sorting and filtering databases to easily retrieve information. • Creating and interpreting charts and graphs to understand data. •
Year 4/5/6	Year A 2024-25					
	Search Engines (Digital Literacy)	Online Safety (Digital Literacy)	Further Coding with Scratch (Computer Science)	Stop motion animation (Computer Science)	Programming Music (Computer Science)	Introduction to Python (Computer Science)
Knowledge	• Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration	• To understand how apps can access our personal information and how to alter the permissions • To be aware of the positive and negative aspects of online communication • To understand how online information can be used to form judgements To	• Using decomposition to solve a problem by finding out what code was used • Using decomposition to understand the purpose of a script of code. • Creating algorithms for a specific purpose • Coding a simple game.	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection, and repetition in programs; work with

	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	discover ways to overcome bullying To understand how technology can affect health and wellbeing	• Incorporating variables to make code more efficient • Remixing existing code	various forms of input and output	programs; work with variables and various • forms of input and output • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	variables and various forms of input and output • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
	Year B 2024-25					
	Collaborative learning (Information Technology)	Website Design (Information Technology)	Computational Thinking (Computer Science)	Micor:bit (Computer Science)	HTML (Information Technology)	Inventing a Product (Computer Science)
	• Understanding that computer networks provide multiple services, such as the World Wide Web, and opportunities for communication and collaboration.	• Building a web page and creating content for it. • Designing and creating a webpage for a given purpose. • Using software to work collaboratively with others. •	• Using past experiences to help solve new problems • Using abstraction to identify the important parts when completing both plugged and unplugged activities. • Creating algorithms for a specific purpose.	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	• Remix existing code • Building a web page and creating content for it. • Understanding that information found by searching the internet is not all grounded in fact • Recognising that information on the	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection, and repetition in

	• Use online software for documents, presentations, forms and spreadsheets • Using software to work collaboratively with others. • Understanding that software can be used collaboratively online to work as a team		• Using abstraction and pattern recognition to modify code	• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	Internet might not be true or correct and that some sources are more trustworthy than others.	programs; work with variables and various forms of input and output • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing,
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						evaluating and presenting data and information • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
Year C 2026-27						
	Mars Rover 1 (Information Technology)	Big Data 1 (Information Technology)	Mars Rover 2 (Information Technology)	Big Data 2 (Information Technology)	History of Computers (Digital Literacy)	Investigating Weather (Information Technology)
	- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and	- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and	- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information - Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration	- Using keywords to effectively search for information on the internet. - Searching the internet for data - Designing a device which gathers and records sensor data. - Recording data in a spreadsheet independently. - Sorting data in a spreadsheet to compare using the 'sort by...' option - Understanding that data is used to forecast weather



	presenting data and information •	presenting data and information • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact •		presenting data and information • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact •		
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Online Safety

The Online Safety element of the computing curriculum is taught 3 times in a year, with the curriculum content spread out across the three sequences of lesson. This is to ensure we can cover any recent changes or development within this area in a timely fashion and to continue to remind children of the importance of the digital world.

Year 1/2	Year A
	Online Safety (Digital Literacy)
Knowledge	• To know what the internet is and how to use it safely • To understand different feelings when using the internet • To understand how to treat others, both online and in person • To understand the importance of being careful about what we post and share online



	Year B
	Online Safety (Digital Literacy)
	• I know what happens to information posted online • To know how to keep things safe and private online • To explain what should be done before sharing information online • To explain why I have the right to say no and deny my permission • To understand the strategies to help me decide if something seen online is true or not

Year 3/4	Year A
	Online Safety (Digital Literacy)
Knowledge	• To understand how the internet can be used to share beliefs, opinions and facts • To understand the effects that some internet use can have on our feelings and emotional wellbeing • To understand the ways personal information can be shared on the internet • To understand the rules for social media platforms
	Year B
	Online Safety (Digital Literacy)
	• To describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy • To describe some of the methods used to encourage people to buy things online • To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true • To explain that technology can be designed to act like or impersonate living things • To explain how technology can be a distraction and identify when I might need to limit the amount of time spent using technology

Year 5/6	Year A
	Online Safety (Digital Literacy)
Knowledge	• To understand how apps can access our personal information and how to alter the permissions • To be aware of the positive and negative aspects of online communication • To understand how online information can be used to form judgements To discover ways to overcome bullying To understand how technology can affect health and wellbeing



	Year B
	Online Safety (Digital Literacy)
	• To describe issues online that give us negative feelings and know ways to get help • To think about the impact and consequences of sharing online • To know how to create a positive online reputation • To be able to describe how to capture bullying content as evidence • To manage personal passwords effectively To be aware of strategies to help be protected online