

COMPUTING INTENT STATEMENT

At Oldbrook First School and Nursery, our aim is to provide a high-quality computing education that is fully inclusive and accessible to all. We aim to equip children to become digitally literate so they can participate in the rapidly changing world, where work and leisure are increasingly transformed by technology. Recognising that the world of technology is fast-evolving, we ensure that our computing curriculum progresses appropriately, enabling children to develop the knowledge and skills necessary to be active participants in today's and the future's digital world. Our curriculum provides pupils with a foundational understanding of computing, including algorithms, simple programs, logical reasoning, and prediction. Pupils will purposefully and creatively store, manipulate, and retrieve digital content while understanding how technology is used in the wider world. We also emphasize the importance of using computing skills across the curriculum to inform and enhance lifelong learning. A strong, age-appropriate understanding of online safety is embedded within our teaching to ensure pupils have the right skills to protect themselves. We aim to develop responsible, well-informed users of technology who can self-regulate and engage safely with digital content and communication.

COMPUTING IMPLEMENTATION

The school follows the National Centre for Computing Education (NCCE) Teach Computing curriculum in Key Stage 1. This structured curriculum is designed as a spiral, where every year group learns through units within the same four key themes: Computing Systems and Networks, Programming, Data and Information, and Creating Media. These strands build upon prior knowledge, reinforcing concepts and skills over time. Pupils are regularly exposed to a variety of computing resources and confidently use these, not only in computing lessons but across the curriculum. This exposure fosters an understanding and appreciation of the role technology plays in both classroom and home environments. Resources include, but are not limited to, laptops, iPads, interactive whiteboards, cameras, and programmable hardware, enabling children to explore, simulate, and code effectively. Frequent assessment is embedded within lessons to allow teachers to scaffold and extend learning appropriately. Teachers use questioning, discussions, and project-based tasks to monitor progress and provide targeted support. Ongoing CPD ensures staff feel confident in delivering high-quality computing lessons, and cross-curricular links are actively encouraged to highlight real-world applications of computing.

COMPUTING IMPACT

Pupils at Oldbrook First School and Nursery develop the knowledge and skills needed to confidently navigate the computing curriculum. They engage with key subject-specific vocabulary and demonstrate a secure understanding of computing concepts. Children should be able to articulate their learning, discussing the themes and strands of computing while recognizing their progression over time. Assessment data, pupil feedback, and teacher observations highlight that children actively participate in computing lessons and develop both technical proficiency and critical thinking skills. They benefit from structured scaffolding and revisiting of learning to embed knowledge effectively. Moreover, our emphasis on online safety ensures that pupils can use technology responsibly in both school and home settings. Children will develop an awareness of computing's vital role in society and how it integrates into everyday life. They will understand how the skills they learn in school can be applied across various technologies they encounter in the future. Additionally, parents will have a strong awareness of the computing curriculum, enhancing the value placed on the subject and supporting children's digital development beyond the classroom. Through enrichment opportunities such as coding clubs and STEM activities, pupils will be inspired to explore computing further, fostering a love for technology, problem-solving, and innovation.

COMPUTING OVERVIEW

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Nursery	<ul style="list-style-type: none"> Follow verbal algorithms Have discussions about how to keep safe Use a range of resources to create a picture To be able to collect quantitative data Use iPads to support learning selecting APPs for a purpose 					
Reception	<ul style="list-style-type: none"> To sequence, to form an experiential routine to get to the right outcome and make predictions Use iPads to support learning selecting APPs for a purpose Use iPads to support learning selecting APPs for a purpose (to create media) To be able to categories objects and gather quantitative data Have discussions about how to keep safe and why we need to keep safe online Explore websites and how we use them to find information To effectively understand and know how to use IT sources relevant to EYFS 					
Year 1	Technology Around Us CS,AL	Digital Painting ET, CM	Moving a Robot AL, PG	Grouping Data DI, AL	Digital Writing ET, CM	Programming Animations PG, DD
Year 2	Information Technology Around Us NW, CS	Digital Photography ET, CM	Robot Algorithms AL, PG	Pictograms DI, ET	Making Music CM, DD	Programming Quizzes PG, DD

STRANDS

AL	Algorithms
CS	Computing Systems
CM	Creating Media
DI	Data and Information
DD	Design and Development
ET	Effective Use of Tools
NW	Networks
PG	Programming

COMPUTING PROGRESSION OF SKILLS

	Early Years Foundation Stage Nursery Reception	Year One	Year Two	Next Steps
Algorithms	<ul style="list-style-type: none"> • Listening and comprehension • Basic understanding of sequence (first, next, last) • Following simple instructions (e.g., "Tap the picture," "Put the block on top") • Recognising cause and effect • Developing attention span • Following more complex instructions (e.g., "Open the app and tap the red circle") • Beginning to understand and follow multiple-step instructions (e.g., "Tap the app, then choose the blue square") • Recognising the order of actions (e.g., start, middle, end) • Understanding cause and effect in a more abstract way (e.g., "What happens if I press here?") 	<ul style="list-style-type: none"> • To choose a command for a given purpose • To show that a series of commands can be joined together • To identify the effect of changing a value • To explain that each sprite has its own instructions • To design the parts of a project • To use my algorithm to create a program 	<ul style="list-style-type: none"> • To describe a series of instructions as a sequence • To explain what happens when we change the order of instructions • To use logical reasoning to predict the outcome of a program • To explain that programming projects can have code and artwork • To design an algorithm • To create and debug a program that I have written 	<ul style="list-style-type: none"> • To explain how a sprite moves in an existing project • To create a program to move a sprite in four directions • To adapt a program to a new context

Computing Systems and Networks	<ul style="list-style-type: none"> • Basic understanding of how to use an iPad (tapping, swiping) • Exploration of educational apps (e.g., apps for colours, shapes, numbers) • Engaging with interactive content (e.g., tapping on animals, colours, or shapes) • Guided selection of apps to match learning activities (e.g., using a letter app for alphabet learning) • Hands-on exploration of digital resources with adult support • Greater familiarity with different types of devices (e.g., iPads, computers) • Using devices with more independence, with minimal adult guidance • Recognising the purpose of different tools (e.g., knowing which app does what: drawing, numbers, etc.) • Basic understanding of how digital resources support learning (e.g., "We use the iPad for learning about letters.") • Exploring internet safety concepts (e.g., recognising simple rules like "Ask an adult before using the internet") 	<ul style="list-style-type: none"> • To identify technology • To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type on a computer • To use the keyboard to edit text • To create rules for using technology responsibly 	<ul style="list-style-type: none"> • To recognise the uses and features of information technology • To identify the uses of information technology in the school • To identify information technology beyond school • To explain how information technology helps us • To explain how to use information technology safely • To recognise that choices are made when using information technology 	<ul style="list-style-type: none"> • To explain how digital devices function • To identify input and output devices • To recognise how digital devices can change the way we work
Creating Media	<ul style="list-style-type: none"> • Using simple tools for creativity (e.g., finger painting, basic drawing apps) • Exploring colours, shapes, and textures • Fine motor skills (e.g., holding a stylus or tapping on a screen) • Imagination and creative expression • Using drawing apps or creative software to produce pictures and patterns independently • Combining physical and digital tools (e.g., drawing on a screen or taking pictures of their artwork) • Developing fine motor skills further (e.g., precision when using a stylus or tapping on specific parts of a screen) • Exploring different tools within apps (e.g., changing colours, shapes, and textures) 	<ul style="list-style-type: none"> • To describe what different freehand tools do • To use the shape tool and the line tools • To make careful choices when painting a digital picture • To explain why I chose the tools I used • To use a computer on my own to paint a picture • To compare painting a picture on a computer and on paper 	<ul style="list-style-type: none"> • To use a digital device to take a photograph • To make choices when taking a photograph • To describe what makes a good photograph • To decide how photographs can be improved • To use tools to change an image • To recognise that photos can be changed 	<ul style="list-style-type: none"> • To explain how digital devices function • To identify input and output devices • To recognise how digital devices can change the way we work

	<ul style="list-style-type: none"> • Creating simple digital projects (e.g., creating a picture or short video) 			
Data and Information	<ul style="list-style-type: none"> • Simple counting and number recognition • Comparing amounts (more, less) • Matching objects to numbers (e.g., 3 toys, 3 blocks) • Identifying patterns (e.g., sorting by colour or size) • Exploring the concept of “how many” • Using apps or physical tools to collect and represent data (e.g., counting objects, sorting by colour) • Beginning to understand more abstract data concepts (e.g., graphs, bar charts, simple data comparisons) • Sorting and classifying items digitally (e.g., sorting animals by size or colour) • Recording data in simple ways (e.g., drawing a picture to show the number of apples) 	<ul style="list-style-type: none"> • To label objects • To identify that objects can be counted • To describe objects in different ways • To count objects with the same properties • To compare groups of objects • To answer questions about groups of objects 	<ul style="list-style-type: none"> • To recognise that we can count and compare objects using tally charts • To recognise that objects can be represented as pictures • To create a pictogram • To select objects by attribute and make comparisons • To recognise that people can be described by attributes • To explain that we can present information using a computer 	<ul style="list-style-type: none"> • To create questions with yes/no answers • To identify the attributes needed to collect data about • To create a branching database

Vocabulary		
Term	Year Group	Definition
Algorithm	1&2	A precise set of ordered steps that can be followed by a human and implemented on a computer to achieve a task
Attribute (property)	1&2	A word or a phrase that can be used to describe an object such as its colour, size, or price
Browser	1&2	SEE: Web browser
Code	1&2	The commands that a computer can run
Code snippet	1&2	A section of a program viewed in isolation
Command	1&2	A single instruction that can be used in a program to control a computer
Computer	E,1&2	A programmable machine that accepts and processes inputs and produces outputs (input, process, output; IPO)
Data	E,1&2	A letter, word, number etc. that has been collected for a purpose, but stored without context
Debugging	1&2	The process of finding and correcting errors in a program
Information	E,1&2	Data put into a context that provides meaning
Information technology	1&2	The study, use, and development of computer systems for storing, processing, retrieving, and sending information
Object	E,1&2	Something that can be named and has other attributes (properties) , which can be labelled
Program	E,1&2	A set of ordered commands that can be run by a computer to complete a task
Property (attribute)	E,1&2	A word or a phrase that can be used to describe an object such as its colour, size, or price
Run (execute)	1&2	To action the commands in a program
Technology	E,1&2	The use of scientific knowledge for practical purposes

Reception (EYFS) is likely to focus more on very basic terms, such as **Computer**, **Program**, **Technology**, and **Algorithm** in a very simple form.

Key Stage 1 (Years 1-2) can start to engage more with technical terms like **Browser**, **Code**, **Debugging**, **Attribute**, and **Command** as they build their understanding of computing and digital literacy.