



## Curriculum Statement: Computing

*"Technology is best when it brings people together."* Matt Mullenweg - Social media entrepreneur

### The Courtwood Curriculum Intent and Offer

<p><b>National Curriculum:</b> Pupils learn the knowledge and skills required of them to be academically successful, building on their individual starting points.</p>	<p><b>Inclusion:</b> Pupils value diversity and demonstrate tolerance, compassion and mutual respect to all members of the school and wider community, whilst developing the life-skills needed to unlock their potential.</p>	<p><b>Nurture:</b> Pupils build their confidence, self-esteem and resilience, developing strategies which enable them to effectively safeguard their well-being.</p>	<p><b>Outdoor Learning:</b> Pupils understand and take responsibility for their influence in living healthy lifestyles, and supporting the planet to be sustainable, both now and in the future.</p>	<p><b>Responsibility:</b> Pupils have an awareness of their own impact on their future and how they can contribute positively to wider society.</p>	<p><b>Enrichment:</b> Pupils access experiences and opportunities which develop aspirations and broaden the horizons of life-long learning.</p>
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### Intent, Implementation and Impact in Computing

<p><b>Intent</b> (What will take place before teaching in the classroom? What do we want our children to know and be able to do?)</p>	<p><b>Implementation</b> (What will this look like in the classroom?) <i>*school focus – retrieval &amp; vocabulary</i></p>	<p><b>Impact</b> (How will this be measured?)</p>
<ul style="list-style-type: none"> <li>• Children to be digitally literate to live, learn, and work in a society where communication and access to information is increasingly through digital technologies like internet platforms, social media, and mobile devices.</li> <li>• Children to use computational thinking and creativity to understand their potential to understand and change the world.</li> <li>• Children equipped to use information technology to create programs, systems, and a range of digital content.</li> <li>• Children to understand and apply the fundamental principals and concepts of computer science, including abstraction, logic, algorithms and data representation.</li> </ul>	<ul style="list-style-type: none"> <li>• The curriculum is designed to meet and exceed the National Curriculum using selected units from Purple Mash, which is an evidence backed scheme which teachers will deliver.</li> <li>• Teachers to read the Declarative and Procedural Knowledge document before planning/teaching a unit of learning.</li> <li>• Knowledge Organisers for KS2 and Learning Mats for KS1, including key vocabulary, to be shared with the class at the start of each unit and to be displayed during all lessons.</li> <li>• Computing-specific language taught explicitly.</li> <li>• Rapid Recall questions to be asked at the start of lessons to practise retrieval and recap previous learning.</li> </ul>	<ul style="list-style-type: none"> <li>• Teaching staff will have an increased subject knowledge and improved skill at delivering the curriculum which will lead to more children meeting and exceeding expected attainment.</li> <li>• Evidence of progression and achievement will be seen in examples of children’s work in their online folders.</li> <li>• Children will speak enthusiastically about their understanding of Computing including computational thinking and computer science, and will know key vocabulary associated with these.</li> <li>• Children are prepared for the digital world that we currently live in and the one that will shape their future. Children will have the knowledge,</li> </ul>



<ul style="list-style-type: none"> <li>• Children to be confident coders and understand, plan, write and adapt basic algorithms with purpose.</li> <li>• Children to be critical thinkers and problem solvers in regard to technology.</li> <li>• Children to understand the importance of computing in the wider world.</li> <li>• Children to be excited by the digital world and their potential to live in it.</li> </ul>	<ul style="list-style-type: none"> <li>• Both of our PSHE and Computing curriculums have discrete online safety units which are taught in each year group and complement each other. The design of our computing curriculum has online safety threaded throughout.</li> <li>• Coding is taught in the summer term each year. Their prior learning will build children’s computational thinking to enable them to apply this learning to the Summer term. They will be able to apply the components of learning from the Autumn and Spring units to create composite tasks in a coding environment.</li> <li>• Each year group has at least one cross-curricular Information Technology unit of learning.</li> <li>• ‘Typing Across the Years’ to be used at the start of lessons where appropriate and for targeted intervention to support building of essential skills.</li> </ul>	<p>skills and enthusiasm to continue computing at secondary school and beyond, potentially pursuing careers in a world where fluency in computing is vital.</p> <ul style="list-style-type: none"> <li>• Children will use the internet in a safe and appropriate manner. Children will be able to be critical thinkers about the digital world including content, other users and behaviour with strategies in place to support them navigate this safely.</li> <li>• Children will be able to share their knowledge of how to be a responsible user of technology through discussion when questioned.</li> <li>• Children will be able to apply their skills and knowledge in other areas of learning.</li> </ul>
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### National Curriculum Objectives

The national curriculum for computing aims to ensure that all pupils:

- ♣ 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.
- ♣ can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- ♣ are responsible, competent, confident and creative users of information and communication technology.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. Key stage 1 Pupils should be taught to:

- ♣ understand what algorithms are; how they are implemented 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.
- ♣ use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- ♣ recognise common uses of information technology beyond school.



♣ use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key stage 2 Pupils should be taught to:

- ♣ 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 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, 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.