



Computer Science and ICT

<p>Intent</p> <p>What are we trying to achieve?</p>	<p>Students develop the ability to think in a logical way and become better at making decisions and problem solving.</p>			
	<p>A high-quality Computer Science education ensures all students:</p> <ul style="list-style-type: none"> • are confident, responsible, and creative users of technology. • can analyse problems in computational thinking terms and have practical experience of writing computer programs. • are prepared for the future giving them opportunities to gain knowledge and develop skills for the ever changing digital world. • a sense of enjoyment and curiosity about the subject. 			
	<p>Confident Communicators</p>	<p>Knowledgeable and Expert Learners</p>	<p>Committed Community Contributors</p>	<p>Future-Ready Young People</p>
	<p>In CS and ICT, we regularly ask students to articulate how and why they have arrived at their solutions. Our students will confidently talk about how technology can have an impact in everyday life. This encourages oracy skills which are further developed in their written answers.</p>	<p>Using expert teachers as guides our students are encouraged to develop their ability to solve problems through decomposition and abstraction techniques. Our use of careful modelling strategies, knowledge organisers and reflection grids creates confidence in this learning and helps build on their strengths.</p>	<p>In CS and ICT we enrich our students through the Bebras and TSOCC Computational Thinking problems, stretch and challenge and further reading materials. Our students will be able to stay safe while exploring the world wide web and be able to share best practises with their wider community.</p>	<p>Our CS and ICT curriculum develops a range of employable skills, analysis and evaluation, algorithmic thinking, problem solving and logical reasoning. In addition we encourage discussions about careers that CS and ICT could lead towards.</p>
	<p>The key concepts that run through your subject are:</p> <ul style="list-style-type: none"> • Algorithmic Thinking (AL) - Algorithmic Thinking is thinking like a computer in a sequence of instructions or a set of rules to get something done. • Logical Reasoning (LR) - Logical reasoning helps us explain why something happens. • Decomposition (DE) - Decomposition is the process of breaking down a task into smaller more manageable parts. • Abstraction (AB) - Abstraction is about simplifying things identifying what's important without worrying too much about detail. • Programming (P) - Programming is the process of designing and writing a set of instructions for a computer in a language it can understand • Evaluation (EV) - Evaluation is about making judgements, where possible is an objective and systemic way. 			