



Computing Curriculum Offer

Intent	<p>Purpose: Pupils will develop a deep understanding of Computer Science, Information Technology and Digital Literacy. This will allow them to use their strong conceptual knowledge and apply it to a multitude of situations. Pupils will have a firm grasp of all areas of computational thinking, regularly using them to complete tasks with and without technology. They will have excellent knowledge of the technological world around them, recognising the interconnectivity of today's world and having a rounded understanding of different systems and networks. They will be able to see this both within and beyond school, understanding the impact of Computing on their lives. Through access to a rich variety of programs, devices and activities, pupils will be able to create a vast array of digital content. They will embrace creativity and the power of their ideas, following and trusting in them from concept to design to creation.</p> <p>Relationships: Pupils will understand that the skills required for Computing can be learned, practised, utilised and improved in many different subjects and situations outside of Computing lessons. They will recognise links between subjects and, through explicit teaching of transferrable skills, know when, why and how to apply them. They will hone their problem-solving, presentation and analytical skills, among many more, and begin to identify their use in their everyday lives.</p> <p>Impact: Computing pupils will become responsible, competent, creative and confident navigators of the three core principles of the subject: Computer Science, Information Technology, and Digital Literacy. Pupils will be able to pack and unpack a wide variety of key concepts, moving confidently and seamlessly between plugged, unplugged, concrete and abstract situations to apply and deepen their understanding. EYFS pupils will recognise the wide variety of situations in which technology is used. They will build familiarity with devices and begin to understand simple concepts through the use of physical computing resources. They will begin to recognise their use of computational thinking skills in different areas of their lives, primarily through play. In KS1 and KS2, pupils will become confident computational thinkers, able to apply their knowledge and skills to tasks, projects, discussions and questions. They will develop their understanding of the technological world around them and be confident when creating many forms of digital content. They will use their computational thinking skills and approaches to create, debug, improve, decompose, and evaluate a vast array of programs, through a variety of applications and unplugged activities. Alongside this, they will build an extensive computing vocabulary and be able to be explicit when explaining or questioning. Pupils will embrace their creativity in all situations, including creating digital content to fit a design brief or complete an assignment. They will be confident creators and users of technology.</p> <p>Metacognition: The fast-moving nature of technology requires Computing to be driven by deep conceptual understanding and transferrable technological skills. Pupils will be able to use a wide range of</p>
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	<p>computational thinking skills and approaches, selecting the methods to fit the situation. They will be comfortable and familiar with the functions, purposes, and mechanics of many pieces of software, able to select, use and combine them to create content or complete tasks.</p> <p>Experiences: As a school, we aim to ensure that pupils are exposed to a wide range of high-quality computing experiences that develop their understanding of Computer Science, Information Technology and Digital Literacy. They will have the chance to embrace problem-solving and creativity across a many devices, applications, and situations. Pupils will be able to use computer technology to support learning in a range of other subjects and understand the real-life importance of computing so that they can access and participate in a digital world. KS2 students will have the opportunity at least once per term to create or present work from another subject using technology, helping to consolidate and further their learning. Where possible, external clubs/visits will be used to augment classroom learning by providing additional learning opportunities.</p>
Implementation	<p>In KS1 and KS2, Computing has been carefully planned across the school to ensure a comprehensive coverage of concepts and skills. Children will consistently use and build upon their grasp of the computational thinking skills and approaches. These are concepts they will have experienced during EYFS and at potentially at home; however, in KS1 and KS2, they are formalised and taught explicitly. This strong base of knowledge and the understanding they craft is the foundation for the rich curriculum taught throughout the rest of primary school. They will develop their understanding of systems and networks, connecting their knowledge to the outside world, other school subjects, and real-life scenarios. Cross-curricular links can be found with English, Maths, Science, PSHE and RHE, and Design and Technology. They will also develop a mastery of many different programs, with which they can create effective digital content to fit a design brief.</p> <p>Key to Computing pedagogy at Uplands is that the pupils develop their understanding of the functions, features and purpose of applications and tasks. This will ensure that children have the transferrable skills required to work responsibly and independently in any situation presented to them. These skills will also allow them to be independent technology users, able to deepen their own knowledge and understanding through experimentation.</p> <p>Computing in EYFS is predominantly practical and begins to develop children's underlying computational thinking skills. Children have access to many problem-solving activities, requiring them to think deeply: predicting, analysing, making judgements, dealing with instructions, spotting patterns, decomposing problems and objects, and focusing on important details. These concepts and skills are essential building blocks that they will continue to develop as they progress through KS1 and KS2. They will build on their familiarity with a range of devices, some of which will stem from home access to technology, such as gaming devices and tablets. There</p>



are opportunities to investigate and decompose physical devices to form a greater understanding of what the device is. Observations will be recorded when appropriate and beneficial to the learning, documentation and tracking. Pupils will explore the purpose of different technologies, such as cameras, tablets, IWB and programmable toys; for example, they will learn how to use make a programmable toy move (Cubetto/Beebot) by following instructions to make a simple program. By the end of EYFS, pupils will be confident technology users, beginning to choose technology for a specific purpose.

In each year group, planning reinforces internet safety and each pupil signs the Acceptable Usage Policy for home and school. This policy can be found in every classroom, the computing display board and on our school website and is always easily accessible to pupils. At Uplands, pupils have a good understanding of our school behaviours – Brave, Respectful, Kind, Resilient, Motivated – and these behaviours are incorporated into discussions about safe and responsible technology use.

At Uplands, Computing is assessed through the following methods:

- Pupils' independent, paired and group work;
- Whole-class discussions;
- Oral questioning;
- Explanations and discussions using key Computing vocabulary;
- Ability to recall key information and sequence it accurately;
- Self and peer-assessment in accordance with success criteria;
- Display understanding and ability to pack and unpack key concepts;
- Formative assessment and feedback, which takes place within lessons so that pupils are supported and challenged as appropriate;
- Investigation of produced work (viewing and discussing code for programming projects, assessing effectiveness of digital content in accordance with a design brief/outcome); and
- Summative teacher assessment, which is carried out at the end of each term.

Throughout these assessment methods, pupils, peers and teachers identify improvement points and areas of understanding to expand, allowing Computing pupils to be constantly evaluating and improving.

Pupils are considered to be GDS if they are able to effectively apply key Computing skills and knowledge independently and successfully, and with increasing complexity, as well as explain the impact and reasons behind their choices when selecting software, skills and approaches to accomplish a given goal. Pupils also seek to extend their understanding by asking further questions and suggesting ways in which these could be answered, as well as challenging themselves to solve any problems they encounter or strive to achieve their vision by experimenting to expand their



	<p>abilities. Pupils working at GDS should be able to analyse, evaluate and present data and information to a high level and confidently write and debug programs.</p> <p>Key English skills such as reading, and writing are used alongside computing skills when recording learning and accessing new and key information. Oracy skills are practised throughout Computing lessons, providing opportunities for pupils to discuss and share ideas in the form of group work and peer support.</p> <p>Subject leaders have a high standard of subject knowledge and conceptual understanding, support the teaching of their subject, and ensure that all members of staff feel confident to teach this area of the curriculum.</p>
Impact	<p>Pupils can discuss and use Computing confidently within the context of the world around us. They understand its importance and are able to identify its application across a variety of real-world situations. They can reflect on, and explicitly describe, links to other subjects. They can traverse plugged and unplugged situations, able to see the parallels between concrete and abstract, using their secure transferrable skills.</p> <p>Pupils are able to assess a given situation, selecting the appropriate combination of computational thinking skills and approaches, or technology, to achieve a specific goal effectively, subsequently evaluating their decisions and output.</p> <p>Pupils are excited about Computing. They are responsible, competent, creative and confident navigators of the three core principles of the subject: Computer Science, Information Technology, and Digital Literacy.</p> <p>Pupils are ready for the next stage of their Computing education and have a vast array of skills, knowledge, understanding and experiences for them to build upon.</p>