

# Clockhouse Primary School The Computing Curriculum



## Our Curriculum Rationale

### What do we want for our children and how will we work together to achieve this?

In response to monitoring and discussions with children and staff, the Computing Curriculum has been reviewed and adapted for 2024-2035. It is a bespoke Curriculum, drawing on research and expertise from four main providers. In order to provide the children with the most up to date and relevant software, we have bought into a Coding programme from Discovery Education. The Computing Curriculum follows the statutory expectations, with children learning the three strands of the curriculum: Computer Science, Information Technology and Digital Literacy.

The Computing curriculum is a developing document that changes with the demands and needs of our pupils as well as society. We are developing links with other subjects including Maths, Science, DT and PSHE, whereby children are able to strengthen their skillset even further. Children are taught the fundamentals and with this, are able to apply their growing knowledge to other areas of the curriculum.

The school continues to draw on this and its own experience each year to create a bespoke, relevant, innovative and creative curriculum for all children.

### What are we trying to achieve through the Computing Curriculum? (*Intent*)

- **Challenge** – At Clockhouse, it is our intention to prepare children for the digital world, by becoming resilient individuals who can manage every day challenges. Children are taught at an early age to debug and correct algorithms, a skill which is built on year by year. Children are given the opportunity to use newly developed skills to apply to digital challenges. Children are also shown how digital tools can help us in our lives, on or offline. Children are also taught about the challenges they may face when using the internet. Digital Literacy is taught explicitly, preparing children for exposure to different types of online behaviours. Through the teaching of Information Technology, children are taught how to adapt their skills when using new forms of technology. Children are equipped with these skills, allowing them to apply their growing knowledge to the ever-changing world of technology.
- **Global Citizenship** – At Clockhouse, it is our intention to ensure children are aware of global issues, in real life and the digital world. Children are taught the importance of taking responsibility for their own actions as well as valuing diversity. It is our aim for children to understand how the world works, including the online community, to encourage children to live in a world they want to live in. Children will understand how we are all socially connected by the online world with the intention that the curriculum supports their development as Global Citizens. By this, we aim for children to exemplify the British Values they are taught and make informed choices about how to act responsibly online. Embedded in the curriculum are also opportunities for children to learn about the radio and research based on other countries. We aim for this to widen the children's understanding and shape them into considerate Global Citizens.
- **Creativity** – At Clockhouse, it is our intention to provide children with opportunities to demonstrate creativity through developing their own programs, systems and digital content whilst applying their developing computational thinking. Although the children will need guidance to access and develop their understanding of the areas taught in Computing, we aim to provide opportunities within lessons for the children to think creatively and problem solve for themselves. The focus of Computing is to be creative, often collaborative, where pupils can apply their own originality and engage in a process of designing, implementing and reviewing; reflecting on the way in which software and digital content are developed beyond the classroom. Children are able to showcase their creativity in cross-curricular lessons, for example with Art, using this as a basis to extend and build upon. We aim to equip children with the knowledge to express their creativity online, and that of others, so they can become respectable members of the online community. We aim to provide a curriculum which allows children to be innovative and ensure a solid grounding for future learning.
- **Aspiration** – At Clockhouse, it is our intention to provide children with vocational skills that are valuable in higher education and employment. Some of the children live in a highly deprived area therefore the school ensures it is Computing rich in terms of resources to expose the children to as many opportunities to ready them for their working life. Through the delivery of our Computing Curriculum, we aim for the children to have the confidence to be ambitious about their future and what they can achieve. The curriculum harbours the school's overreaching vision that children have experiences within the curriculum that promote a life-long learning experience for future success. Children are taught the fundamental skills in Computing to equip them for the digital world and beyond.
- **Well-being** – At Clockhouse, it is our intention that children know how to keep themselves and others safe. Children are taught to use, access and express themselves through digital technology, including a critical understanding of technology's impact on the individual and society. Children are aware of the importance of well-

being; this is an integral part of our Computing curriculum and aligns to Education for a Connected World and Teaching Online in Safety in Schools (DfE) so that children focus on the key aspects of online education which will support them to live knowledgeably, responsibly and safely in a digital world. Digital Leaders are selected in school to support children with their knowledge and understanding of Online Safety and the Computing Curriculum. Learning is adapted to ensure all children are able to access this and make progress, regardless of their starting point and barriers to learning.

- **Cultural Capital** – At Clockhouse, it is our intention that children are given the opportunity to excel. Through the school's approach to teaching non-core subjects, the children should not have a ceiling put on their learning, and are therefore able to access tasks, which are adapted to meet their needs and stage in learning. We aim to develop confidence and self-esteem through problem-solving, enhancing their growth mindset and supporting their ability to aspire and achieve. Children will learn in an environment where they are encouraged to succeed, in order to shape their future.

### **How is the Computing Curriculum delivered? (Implementation)**

- A thorough, ambitious and bespoke curriculum provides coverage of the National Curriculum. Teaching and learning across all key stages involves the elements made up of the Computing Curriculum: Computer Science, Information Technology and Digital Literacy.
- Coverage of these three areas of Computing (Computer Science, Information Technology and Digital Literacy) are evenly spread across each term. This ensures children are learning an element of each part of the curriculum, in order to support accurate assessment.
- In most year groups, Computing is taught on a weekly basis, following the unit overviews, where children are able to understand, use, explore, apply and create.
- Children are taught an Online Safety lesson each half term. In addition to this, each 8 strands of the Education for a Connected World document are interwoven in each unit.
- Computing is embedded across the curriculum. Planning is matched with long term plans and links with other subjects, including Science, Maths and English. Children are given the opportunity to recognise the links between these subjects, in order for them to deepen their understanding. With this, it will provide a wealth of learning opportunities and transferable skills.
- Children will be taught to 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. The learning environment projects the importance of Online Safety and supports children with their increasing knowledge.
- Year 5 and 6 have 90 Chromebooks across the year group to use on a daily basis to support their learning further. Other resources include laptops for KS1 and KS2, used on a regular rotation, as well as Beebots, iPads and touch screen Computers.
- In depth, regular monitoring of the subject allows subject lead to identify gaps, common misconceptions and advise subject priorities for the upcoming term.
- Progression of skills is clear across the school and documented, building on children's knowledge and understanding year on year. They have opportunities to apply their learning and develop new skills.
- Children will be taught Computational Thinking as part of Computer Science embedded in the curriculum which will provide the foundation for everyday life using technology.
- The deployment of the IT Technician supports children and staff in school, offering relevant advice and assistance.

### **What difference is the Computing Curriculum making? (Impact)**

- Children will become confident, independent users of technology and accomplish a wide range of goals as part of the digital world.
- Children will have a growing understanding of the ever-changing technological world, where they will be able to apply their skills to a range of technology.
- Children will have a comprehensive understanding of the importance of Online Safety and how to act responsibly online, joining the world on its digital platform. With this, they will be equipped with the knowledge of how to be responsible when using the internet and will demonstrate this when accessing the internet at school and at home, even when nobody is watching.
- Children will be able to confidently and independently use a wide range of software and hardware, becoming diligent learners who value Online Safety.
- Confidence in this subject will enable children to become competent and independent in key life skills, including logical thinking and evaluation.
- Importantly, children will relate to thinking skills and problem solving across the whole curriculum and through life in general.