Computing Curriculum Overview

Computing Intent

In line with the 2014 National Curriculum for Computing, our aim is to provide a high-quality computing education which equips children to use computational thinking and creativity to understand and change the world. The curriculum will teach children key knowledge about how computers and computer systems work, and how they are designed and programmed. Learners will have the opportunity to gain an understanding of computational systems of all kinds, whether or not they include computers.

By the time they leave Horizon schools, children will have gained key knowledge and skills in the three main areas of the computing curriculum:

- computer science (programming and understanding how digital systems work),
- information technology (using computer systems to store, retrieve and send information)
- digital literacy (evaluating digital content and using technology safely and respectfully).

The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for future learning and beyond.

EYFS

Computing lessons in EYFS ensure that children develop listening skills, problem solving abilities and thoughtful questioning- as well as improving skills across all seven areas of learning. We teach children to use technology safely across a range of activities in every area of continuous provision.

Computing National Curriculum Aims

In line with the Computing Programmes of Study KS1 and KS2 the school 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.

Computing Curriculum Overview

Rationale for Sequencing

At Horizon Academy Trust, computing is taught sequentially throughout each year group starting with EYFS. This ensures children are able to develop depth in their knowledge and skills over the duration of each of their computing areas of learning.
Knowledge and skills are mapped across each unit of work and year group to ensure systematic progression. Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps they have been taught.

Computing Implementation

The implementation of the curriculum also ensures a balanced coverage of computer science, information technology and digital literacy. The children will have experiences of all three strands in each year group, but the subject knowledge imparted becomes increasingly specific and in depth, with more complex skills being taught, thus ensuring that learning is built upon. For example, children in EYFS experiment with technology in different ways and through different programmes. Children in Key Stage 1 learn what algorithms are, which leads them to the design stage of programming. In Key Stage 2, this knowledge is built on where they design, write and debug programs, explaining the thinking behind their algorithms.