



Computing Curriculum Statement

Our C.L.E.A.R curriculum drivers are:

- CARE We treat each other and property with respect
We keep ourselves physically and emotionally safe and healthy
- LEARN We know learning helps us grow by doing and knowing more
We learn and challenge ourselves in different ways to reach our goals
- ENGAGE We value and enjoy all learning opportunities and experiences
We are proactive members of our learning communities
- ACHIEVE We set high expectations of ourselves and always give our best
We take pride in all we do and celebrate all our efforts
- REFLECT We embrace our next-steps in learning
We find ways and seek to do things better next time

Our curriculum is implemented through;

An **EPIC** approach to learning;

- Enquiry-led - children are active partners in their learning.
- Purposeful - learning is meaningful and there is an end goal.
- Innovative - learning is personalised to meet children's needs.
- Challenging - the pitch, pace and standards of learning are right for each individual child.

Curriculum Intentions:

At Foxhills we aim for our children to become computer literate by being able to use computational thinking and creativity to understand and change the world. The curriculum has been designed to teach children the powerful 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. Powerful knowledge refers to the knowledge the school has identified as being the most crucial content that all children must acquire to ensure they meet the milestones for the end of Early Years Foundation Stage and Key Stage One in Computing.

Our computing concepts are:

- Coding
- Collating and retrieval
- Connecting and communicating

At Foxhills, the characteristics of an effective computer literate learner are:

- An ability to solve problems and think logically
- An ability to communicate and collaborate with others effectively
- Being able to respect others wishes and follow rules
- An ability to listen and follow instructions
- Being able to persevere and be resilient in order to achieve a desired outcome
- An ability to be creative and imaginative
- An ability to use and understand a wide range of technology

Curriculum Implementation

How is the computing curriculum organised and how does it progress?

The computing curriculum begins with the concept of Connecting and Communicating for children in our Early Years Foundation Stage (EYFS). This is because children starting school will learn to communicate in new ways and for different purposes with their teachers and peers. As they will be naturally communicating, it is logical for them to acquire new ways of expressing their thoughts, feelings and ideas. They interact with their new environment and learn to collaborate to find out information both from the people around them and from their learning experiences. Adults support children to connect ideas, follow instructions and explain cause and effect. As the Autumn term progresses, children are supported to make links between their own ability to respond and react with the function of technology. During the Spring term, the children learn the concept of collating and retrieval as they develop their understanding of cause and effect further still. This is positioned at this point in the year to provide children with opportunities to practise giving and receiving instructions as well as exploring a range of technology. In the Summer term, there is the opportunity for children to revisit these concepts to practise and develop their understanding in readiness for Year 1.

As children move to Year One, they revisit the concept of Connecting and Communicating because it builds on from what they have learned in EYFS but challenges them to make choices and deepen their understanding of cause and effect. At the same time, the children are taught about internet safety as there is an increased expectation of independence and autonomy and it is important that children are able to work alone safely and know when to seek help. As children are exposed to all national curriculum subjects at this stage, we give them opportunity to research and represent information in different ways and understand how technology can be used for this purpose. This aids them in their learning across the curriculum. During the Spring term, children revisit the concept of coding as they make deeper links between instructions given to humans and instructions given to technology and are introduced to more subject specific vocabulary like algorithm. They are exposed to a range of programs so that they understand that technology serves a range of purposes. This helps them to understand technology's place in the world and is an important milestone in helping them become computer

literate. In the Summer term, children are challenged through the concept of coding by giving precise, unambiguous commands using logical reasoning and problem solving skills to reinforce cause and effect. They are also introduced to technology as a way to communicate effectively.

In Year Two, curriculum sequencing focuses on embedding concepts and giving children the opportunity to apply their knowledge as a skill. Task design and learning opportunities in Year Two support children to deepen their understanding and problem solve using their acquired knowledge; tasks focus on children persevering, fine-tuning, thinking critically and responding to feedback. Children are given ample opportunity to utilise technology to represent data, navigate safely and differentiate between functions and programs.

We aspire for every child to get better at computing during their time at Foxhills. Getting better comes from regularly revisiting knowledge and applying it in new or different contexts because it aids children in connecting new information to an existing schema. This strengthens children's memory. Acquiring the characteristics of effective learning will also support our children at getting better at computing.

Our computing curriculum is organised to ensure children have the opportunity to repeat, practise, recall and retrieve key knowledge in different ways. Concepts are taught in a progressive sequence; with each concept building on what has been taught before.

Proficiency in computing comes from acquiring knowledge, conceptual vocabulary and the characteristics of effective learning. Knowledge, vocabulary and the characteristics of effective learning inform all task design. Within each lesson, knowledge and associated vocabulary are selected for emphasis and thoroughness. Lessons are never in isolation. Learning journeys are used to ensure all lessons fit within a sequence so teachers know what has gone before and what comes next. Learning journeys enable teachers to purposefully position knowledge to build on previous and subsequent teaching.

How are tasks designed?

In order to develop subject specific understanding, our computing concepts are taught discreetly. Discreet teaching is necessary because children need time to develop skills and practise using equipment. These skills are modelled and practised repeatedly to support children in developing unconscious competence for them to be able to use a range of technology effectively throughout their lives.

Typically, learning in Computing takes the form of:

- Hardware familiarisation
- Software familiarisation
- Following and giving instructions
- Cause and effect
- Storing and retrieving data
- Editing and improving based on feedback
- Experimenting and refining

What does Computing look like across the curriculum?

Children who are computer literate will be able to operate technology effectively, use programs accurately, navigate online safely and understand the functions of technology. These skills are promoted through the curriculum and in other subjects, especially; geography, maths, RSHE, PE and English.

Which skills or knowledge can children not access the rest of the curriculum without?

Computing learning strengthens children's abilities to navigate the age of technology by operating a range of devices effectively, storing and retrieving data and giving and following instructions. These skills support them in PE, unstructured times of the day such as play times and lunch times and lessons such as Maths and Science. It encourages opportunities for thinking logically, sharing ideas and making links. These skills can be applied throughout the curriculum.

Provision for SEND and Greater Depth

All children are taught about the uses of technology and cause and effect through computing teaching. There is a strong focus on skill acquisition as this supports all children in becoming computer literate. The school has identified the crucial knowledge that all children must acquire and presents this knowledge in different ways to support acquisition for individuals.

Effective provision for pupils with SEND includes; quality first teaching based on accurate assessment of learning, pre-teaching of crucial knowledge and skills, careful mixed-ability pairings to enable pupils to learn from one another, adult support, support to access vocabulary and dual coding in sources of knowledge. At Foxhills, we believe that every pupil, regardless of their background, can become computer literate. Children who are working at greater depth are challenged by tasks which promote deeper connection-making and critical thinking. They are asked to utilise technology for a range of tasks and are asked to be an expert for their peers to share their knowledge. Assessment for learning is used in lessons and between lessons to ensure tasks are appropriately pitched.

Curriculum Impact

A child who has acquired the crucial knowledge and developed proficiency in Computing, will demonstrate the characteristics of effective learning:

