



Computing

Intent

At Westfields Infant School, we want children to develop the knowledge, skills and competencies to access the next stage in their learning. In addition to this, we actively encourage and motivate the children to develop positive attitudes, skills and habits so that they are well equipped for the future.

Our intention for computing at Westfields Infant School is to impart every child with the knowledge, understanding, confidence and skills to become safe, creative, digitally literate, computational thinkers. Our aim is to enable every child to understand the significance of computing in everyday life and reach their potential as individuals in an increasingly technologically advanced society and in the digital community. We provide a series of learning opportunities and first-hand experiences that supports children in becoming digital citizens within the community. Through engaging, creative lessons, children will learn relevant skills they can use across the curriculum to enhance their learning and have pride in their achievements. At Westfields Infant School, we ensure our series of lessons allow the children time to reflect, analyse and improve their learning in order to build resilience and gain a sense of pride in their work. We ensure what the children learn is relevant to them and enables them to use the skills taught to further their progress, as an individual.

At Westfields Infant School, our computing curriculum covers key aspects of the [Statutory Framework for the Early Years Foundation Stage](#) where technology is used to enhance the seven areas of learning and is based on the [National Curriculum for Computing](#).

The National Curriculum for Computing 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.

Implementation

At Westfields Infant School, computing is taught using the Teach Computing curriculum, which ensures we are providing a world leading curriculum with high quality computing teaching offering a range of learning experiences from the Early Years Foundation Stage and through Key Stage 1. The Teach Computing curriculum systematically reduces the amount of knowledge lost through forgetting; as the key concepts (information technology, digital literacy and computer science) are revisited regularly. Children revisit each theme through a new unit that consolidates and builds on prior learning within that theme. Through the three concepts, every child will be able to develop their knowledge and skills in these fundamental principles to ensure they become creative, digitally literate, computational thinkers.

Computing is a broad discipline and teachers require a range of strategies to deliver effective lessons. Each of these twelve principles are underpinned by research and cemented across other key disciplines in our curriculums:

Lead with Concepts - Acquisition of knowledge, through the use of key concepts, term and vocabulary

Structure Lessons - Supportive frameworks when planning lessons

Make Concrete - Bring abstract concepts to life with real-world contextual examples

Unplug, unpack, repack - Unpack complex terms in unplugged familiar context, repacking in new understanding

Work together - Collaboration using pair programming and peer instruction

Read and explore code first - Focus on code 'reading' then code writing

Model everything - Providing scaffolding that can be gradually taken away

Get hands-on - Combining electronics and programming with arts and crafts for a sensory experience to enhance learning

Challenge misconceptions - Using formative questioning to uncover misconceptions

Add variety - Adapting instructions to keep all children engaged and encourage greater independence

Foster program comprehension - Secure understanding and build connections with new knowledge

We have structured units of lessons with resources that can be tailored alongside scaffolded activities so that all children can succeed and thrive. It builds on a set of pedagogical principles that are underpinned by the latest computing research. As research continues to develop, every aspect of the Teach Computing curriculum is reviewed each year by (National Centre Computing Education) NCCE and changes and adaptations are made where necessary by our computing co-ordinator.

At Westfields Infant School, to enable the delivery of our lessons, we have a range of key technology. Each classroom has a Promethean Interactive Whiteboard and we are equipped with a half class set of iPads as well as half class set of touch screen laptops.

E-safety is an important component of our computing curriculum and each year, we participate in an annual e-safety day where children across all year groups are taught about e-safety in an age appropriate way. Parents are also kept up to date using a variety of communication methods e.g. school newsletters, emails and information sent via ClassDojo.

Impact

The impact of our computing learning can be seen within books, learning saved in the children's drive and by speaking to the children themselves. We measure the impact regularly through:

- Whole class and verbal feedback
- Recapping prior learning at the beginning of each lesson and plenary activities
- Teacher assessment, self-assessment and peer assessment of learning
- Completion of the Computing Foundation Subject Assessment document at the end of each unit, identifying children not achieving expected standard and those exceeding
- Subject monitoring e.g. pupil conferencing and planning monitoring

By the time our children leave Westfields Infant School, they 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) and Digital Literacy (evaluating digital content and using technology safely and respectfully). The objectives within each strand support the consistent development of learning, ensuring a solid grounding for future learning in Key Stage 2 and a thirst for new experiences.