



National Curriculum Aims

The 2014 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.

Intent

At West Lodge, Computing is integral to everyday life and plays an immeasurable part in our children's futures. The teaching of Computer Science provides our children with the skills to ensure that they are computational thinkers who are ready to face the exciting challenges of, and thrive as creators and collaborators in a growing technological world. Children value the importance of being a responsible digital citizen and think carefully about the contributions they make online towards their digital footprint. Computing lessons ensure that pupils experience a rich and broad curriculum, allowing them to express themselves and sparking their curiosity whilst further developing their knowledge through information technology.

Implementation

Our curriculum for Computing is sequenced appropriately across the three areas of computing (ie Computer Science, Digital Literacy and IT) with natural links to other curriculum areas. Planning demonstrates a substantive and disciplinary approach to teaching. Children develop fluency in using technology for a range of purposes.

Staying safe online is integrated into all areas of the curriculum. It is taught specifically in computing and integrated within the SOW. It is also taught within PSHE. Computing lessons focus on collaboration and creativity by providing extended periods of time to work independently and with others to solve problems and develop the knowledge and skills required to be computational thinkers. Strong links are maintained with parents and materials are shared routinely.

Impact

The impact and measure of this is to ensure that children at West Lodge are equipped with relevant and high quality computing skills that they will need in a future world where technology plays an increasingly important role in our everyday lives and will be essential in almost every possible area of future employment.

Teachers use formative assessment from their observations in the classroom and their evaluations of the activities children undertake.

What children say about their learning will also be a good measure of their success in learning from the Computing curriculum. We also expect all children to be able to demonstrate a very sound understanding of how to keep themselves and others safe on-line through what they say and what they do.

Knowledge and Skills

There are three aspects to the computing curriculum:

- Computer Science (CS) The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
- Information technology (IT) pupils are equipped to use information technology to create programs, systems and a range of content.
- Digital Literacy (DL) digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology.

An effective curriculum for Computing will promote:

Computational thinking and creativity. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.

Creativity

Our curriculum for Computing has many opportunities for children to demonstrate creativity either independently or collaboratively through a range of projects.

Children learn to create and debug their own programs through the use of block coding eg Espresso Coding, Purple Mash and Scratch and through the text based languages HTML and Python.

Through cross-curricular learning, children will design and create websites, blogs and short movies. These will be shared with and critiqued by their peers.

Digital leaders will explore the use of green screen technology to create and edit films.

Assessment

At West Lodge tracking children's progress throughout their school life is vital in order to establish their acquisition of knowledge and skills.

Teacher's plan using schemes of work from a range of sources such as Espresso Coding, Purple Mash, Rising Stars and Teach Computing.

Units of work are then personalised to the children. Misconceptions that arise throughout the unit are identified and addressed appropriately by the teacher.

Teachers will assess children against key objectives in Computing twice a year using their teacher judgement and work produced by the children.

Children will keep a record of their learning in Computing by saving the work they create electronically. They may also use other means of recording their learning including printing work, video clips and photographs.