Computing

Intent

The intent of our Computing curriculum at Upton Westlea is to ensure that our children receive an exciting, rich, relevant and challenging Computing curriculum. We strive to enthuse and equip children with the capability to use technology throughout their lives by giving children access to a variety of hardware, software and unplugged resources. Though our Computing curriculum we strive to teach children to become responsible, respectful and competent users of data, information and communication technology. We aim to equip children with skills, strategies and knowledge that will enable them to reap the benefits of the online world whilst being able to minimise risk to themselves and others. Through our teaching we will use computational thinking beyond the Computing curriculum.

Implementation

At Upton Westlea we follow the 'Teach Computing' Curriculum and this covers all aspects of the National Curriculum. The curriculum equips children with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. The curriculum can be broken down into 3 strands: computer science, information technology and digital literacy. Below is how Computing is implemented in the different Key Stages.

Early Years

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play.

Computing is not just about computers. Early years learning environments should feature IT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for children who have English as an additional language.

Key Stage 1

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions.

- Write and test simple programs.

- Organise, store, manipulate and retrieve data in a range of digital formats.

- Communicate safely and respectfully online, keeping personal information

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private, and recognise common uses of information technology beyond school.

Key Stage 2

- Design and write programs that accomplish specific goals, including controlling or simulating physical systems (crumble kits); solve problems by decomposing them into small parts.

- Use sequence, selection and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predict outputs to test programs.

- Use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs.

- Understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration.

- Describe how internet search engines find and store data; use search engines effectively; and be discerning in evaluating digital content.

- Use the internet respectfully and safely by respecting individuals and intellectual property; use technology responsibly, securely and safely.

- Select, use and combine a variety of software to accomplish a given goal, including collecting, analysing, evaluating and presenting data and information.

Planning

The school uses Teach Computing Curriculum - a whole-school scheme of work for Year 1 to Year 6 pupils. Teach Computing fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing. Our computing scheme aims to instill a sense of enjoyment around using technology and to develop pupil's appreciation of its capabilities and the opportunities technology offers to, create, manage, organize, and collaborate. Tinkering with software and programs forms a part of the ethos of the scheme as we want to develop pupils' confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology. Through our curriculum, we intend for pupils not only to be digitally competent and have a range of transferable skills at a suitable level for the future workplace, but also to be responsible online citizens. The scheme of work enables pupils to meet the end of Key Stage Attainment targets outlined in the National curriculum.

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Impact

Children's attainment is assessed using the Computing Assessment framework. This has been developed in line with a whole-school progression of skills, knowledge and understanding. The acquisition of knowledge, skills and understanding in each subject will be measured using formative and summative teacher assessment. Pupil Voice will take place annually to gain an understanding of pupils vies of the Computing subject. The Computing lead is released from the classroom to monitor and evaluate the quality and standards in Computing across the school with lesson observations and book scrutinise.