

Intent, Implementation and Impact

Computing

Intent

Through our computing curriculum at West Byfleet Junior School we aim to give our children the life-skills that will enable them to embrace and utilise new technology in a creative, as well as responsible and safe way in order to flourish. Our computing curriculum develops the skills and knowledge children need to become autonomous, independent users of computing technologies, gaining confidence and enjoyment from their activities.

We provide opportunities for our children to be digitally literate and competent users of technology with an understanding of how technological devices and software are an integral part of everyday life and that as a society we are becoming ever more reliant on technology to guide, innovate and develop practice in the workplace, education, and daily life. The use of technology supports learning across the entire curriculum and is key to developing creativity, resilience, problem-solving, and critical thinking skills.

Implementation

Our computing curriculum is built around the DFE funded Teach Computing scheme of work (<https://teachcomputing.org>) which has been customised for schools to include relevant digital and learning resources. The scheme is structured in units.

The units are based on a spiral curriculum, where each of the themes is revisited regularly. Children revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This reduces the amount of knowledge lost through forgetting, as topics are revisited yearly. It also ensures that connections are made within a theme in consecutive years. For these units to be coherent, the lessons within a unit are taught in order.

Each lesson is sequenced so that it builds on the learning from the previous lesson, and where appropriate, activities are scaffolded so that all pupils can succeed and thrive. Scaffolded activities provide pupils with extra resources, such as visual prompts, to reach the same learning goals as the rest of the class. Exploratory tasks foster a deeper understanding of a concept, encouraging pupils to apply their learning in different contexts and make connections with other learning experiences. As well as scaffolded activities, embedded within the lessons are a range of pedagogical strategies, which support making computing topics more accessible.

Within the Teach Computing Scheme, every year group learns through units within the same four themes, which combine ten strands.

Algorithms - Be able to comprehend, design, create, and evaluate algorithms

Computer networks - Understand how networks can be used to retrieve and share information, and how they come with associated risks

Computer systems - Understand what a computer is, and how its constituent parts function together as a whole

Creating media - Select and create a range of media including text, images, sounds, and video

Data and information - Understand how data is stored, organised, and used to represent real-world artefacts and scenarios

Design and development - Understand the activities involved in planning, creating, and evaluating computing artefacts

Effective use of tools - Use software tools to support computing work

Impact of technology - Understand how individuals, systems, and society as a whole interact with computer systems

Programming - Create software to allow computer to solve problems

Safety and security - Understand risks when using technology, and how to protect individuals and systems

Impact

Our approach to the curriculum results in a relevant, engaging, and high-quality computing education. The spiral structure allows for areas to be revisited so that misconceptions and knowledge gaps can be addressed. This supports varied paces of learning and ensures all pupils make good progress. By the end of Year 6, children should feel confident in using a range of technology. They should be able to recognise how to keep themselves safe online, and they should understand the importance of being a good digital citizen. Children should have a sound knowledge of up to date technologies and how they can be used to enhance their learning and the curriculum.