



# Curriculum Policy

## Computing



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# Computing Policy

## What is our vision?

Children at Farington will be equipped with a skill set for life in modern Britain. They will be able to use a range of software to communicate, research and express themselves. Pupils will apply a Growth Mindset and display resilience when problem solving (debugging), allowing them to become independent and confident young adults. They are able to use technology safely, respectfully, and responsibly. Children can identify dangers and know how to report any concerns.

By the end of Year 6, children will leave Farington with the skills to understand and apply fundamental principles and concepts of computer science, including logic, algorithms, and data representation. They will be able to analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems. Children will evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. They will become responsible, competent, confident, and creative users of information and communication technology.

In EYFS, Computing is centred around play-based activities that focus on building children's listening skills, developing curiosity and creativity, and problem solving.

At Farington, Technology in the Early Years can mean:

- taking a photograph with a camera or tablet
- searching for information on the internet
- playing games on the interactive whiteboard
- exploring other mechanical toys
- watching a video clip
- use Beebots
- listening to music
- selecting their favourite tracks to dance to, or play along with a range of instruments, in the outdoor provision

By giving children the opportunity to explore technology in this way, often child-led, means that not only will children develop a familiarity with equipment and vocabulary, but they will have a strong start in Key Stage 1 Computing.

## Curriculum Aims and Impact:

Progression is evident through all year groups and children's skills are transferable and built upon.

The core of computing is computer science, in which children understand how digital systems work through their knowledge of programming.

Children are able to express themselves through effective communication as active participants in a digital world.

Children have a growing understanding of technological implications of the world we live in.

Children are able to investigate and explore new technologies, and are true 'digital natives'

### How do we achieve this?

Across school, the Purple Mash Computing scheme is being taught. Teachers using this package ensure all lessons are skills based and are progressive from year group to year group.

Pupils are immersed in high-quality computing lessons, using a range of hardware and software, following the Purple Mash package.

Computer Science is taught across school using the Purple Mash software. Learning is built upon in Key Stage 1 from the Early Years through the exploration of the Beebots app and 2Go software in Year 1, before developing their own 2Code by the end of Year 2.

In LKS2, children continue to develop their knowledge of 2Code and 2Logo, with a progression of skills taught.

By UKS2, pupils are applying their knowledge to increasingly complex programming and designing tasks using 2Code and 2DIY in Year 5 and 2Code, Text Adventures, Networks and Understanding Binary in Year 6.

The use of Information Technology is inter-woven throughout our curriculum, allowing pupils to apply the skills they have acquired in Computing, to a variety of learning experiences. In addition to this Information Technology is taught as a stand-alone unit across 3 half terms per year from Years 1 – 6.

With our nurturing ethos continually at our core, we aim to respond to the ever-changing world in order to keep our pupils safe. E-Safety is taught to a high-standard across the school and is embedded into all teaching and learning of Computing. In addition to this, E-Safety links closely to our PSHE 1Decision Scheme and National E-Safety Day is recognised each year.

Digital Literacy is reinforced each half term, through a varied selection of age-appropriate activities.

Key vocabulary is at the heart of Computing teaching and learning and underpins every lesson. Key vocabulary is progressive throughout year groups.

### Scheme of Work:

The subject areas that need to be covered, are set out in the school's Curriculum Planning Document. Key skills are taken from the Key Specification. Purple Mash is used to support the planning and teaching of the subject. Subject-specific vocabulary is available on the Computing Key Vocabulary Document.

### Resources:

Beebots are available for Reception to use and the iPad trolley is locked within the ICT Suite, with a key stored in the school office. All classes have an allocated weekly slot in the ICT Suite but can

book the iPads or additional sessions to support cross-curricular learning. Technical problems can be reported to our ICT Technician or by issuing a ticket to the Trust Help Desk.

### Assessment – How do we assess skills and understanding?

Teachers assess children's understanding at the end of a half-term, against the DL/CS/IT skills taught in that unit. Judgements will be formed from a range of sources: written/printed/saved pieces of work, contributions to whole class discussions, partner talk and focussed questioning.

### Health and Safety

- Water bottles are not allowed in the ICT Suite.
- Children are reminded to use the equipment safely and respectfully.
- Teachers supervise pupils during lessons and clear instructions, expectations and boundaries are given.
- Teachers/Teaching Assistants supervise returning the iPad trolley.
- Children are taught the importance of keeping their password private.

### Inclusion and Safeguarding Considerations

At Farington, we aim to provide an inclusive Computing curriculum for all pupils, regardless of gender, race, class, physical or intellectual ability. We place great emphasis on the skills of independence and resilience, promoting the importance of applying a Growth Mindset when debugging computer programmes. Children are encouraged to support each other through partner and group tasks, solving problems through verbal reasoning. We have the highest expectations of all pupils, while recognising that children develop and progress at different rates.

### Other Points/Considerations:

Teachers should consider the availability of the facilities and resources, ahead of the lesson, and book these in advance if required.

### Monitoring and Review:

The Computing Coordinator will develop a yearly Subject Leader Action Plan, based on a review of the previous year's audit and evaluations. This will lead the long-term vision for the subject and identify areas of improvement and where staff CPD and resources need to be allocated. A Science audit may combine samples of children's work from cross-curricular topic books, class big books, saved work from the shared drive and through pupil interviews.