

## Computing



**‘Alan Turing gave us a mathematical model of digital computing that has completely withstood the test of time. He gave us a very, very clear description that was truly prophetic.’ – James Dyson**

### **What do we love about our subject?**

Giving children a quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

In a world where it is predicted that 90% of jobs will require some form of digital skills and where 93% of tech companies find that the digital skills gap affects their commercial operations, the importance of being digitally literate is increasingly vital to the every-day, modern world.

### **How do we want pupils to talk about our subject?**

We want pupils to talk enthusiastically, excitedly and passionately about Computing and to recognise the importance to their present and future lives and to be proud of their use of technology and the creations they build as a result.

Through our Computing education, we want children to identify the links between Computing, Maths, History, Science, Music, Art and Design and Technology and to recognise the ways in which the use of technology can support their achievements and understanding of these areas.

We want our pupils to understand the fact that there is always a choice with using technology and to talk articulately about the ways they can be responsible users of technology and the importance of doing so.

### **What are some of the big ideas in our subject?**

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.

### **How is our subject taught and organised so learning is retained in the long-term memory?**

Computing is taught as a discrete subject so that the value and the strengths of the subject can be made clear.

Each unit of work is placed strategically within its relevant year group and learning is carefully sequenced so that knowledge and understanding is built coherently, concepts are not forgotten and that progression is secured.

This can be seen through the focus on basic computer skills in Year 1 which provide the foundation for success in all later units of work or when children understanding algorithms through physical representations in Key Stage 1 before applying this understanding in increasingly abstract terms and complex programmes as they progress through school.

### **How do we enrich our subject?**

Computing is enriched through:

Links with the LSMS and using Computing to support the teaching of Music

### **What do we want pupils to leave Fairfield being able to do?**

Ultimately we want children to leave Fairfield well on the journey towards becoming positive and responsible, masters of technology. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this.