



## **NEW MILLS PRIMARY SCHOOL**

### **Computing Programme of Study**

Our computing curriculum helps to prepare children for the wider world. It develops problem solving skills, opening children's eyes to the digital world with an additional focus on online safety.

#### **National Curriculum**

The National Curriculum for computing in England was introduced by the Department of Education in 2014. The curriculum aims to equip young people 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, with the aims of the curriculum reflecting this distinction.

The national curriculum for computing aims to ensure all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation (Computer science)
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems (Computer science)
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (Information technology)
- are responsible, competent, confident and creative users of information and communication technology. (Digital literacy)

[National curriculum in England: computing programmes of study - GOV.UK \(www.gov.uk\)](https://www.gov.uk/national-curriculum-in-england/computing-programmes-of-study)

## Intent

To create an inclusive, inspiring and challenging curriculum, which develops transferable skills in programming, word processing and data analysis, enabling children to be successful and safe in the technological world.

## Implementation

At New Mills Primary School, we follow the Barefoot programme of study when teaching our computing curriculum.

In Key Stage 1, children will be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.
- Use logical reasoning to predict the behaviour of simple programs.
- Develop word processing skills using Microsoft Word, Publisher and PowerPoint.

In Key Stage 2, children will be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some simple algorithms work 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.
- Apply word processing skills across the curriculum.

In addition, children are prepared to be safe when using technology through age-appropriate E-safety teaching.

## Impact

Our broad and balanced, knowledge based curriculum enables our children to develop skills in computing, preparing them for their futures. It provides a solid foundation on which they can further develop their knowledge of coding and digital design at Key Stage 3, along with word processing skills and a strong understanding of how to be safe online.