



Computing



Our Computing leaders are Mrs Millard and Mr Gregory.

INTENT

At the heart of our curriculum are our school curriculum drivers – Diversity, Responsibility and Opportunities. The drivers shape our curriculum, bring about the aims and values of our school, and respond to the needs of our community. Here at Moat Farm Junior School, we follow the national curriculum KS2 Computing Programmes of Study.

The principal aim of computing is to provide our children with a high-quality computing education, which equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology; it provides insights into both natural and artificial systems. The core of computing is computer science, in which our pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, our pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that our 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.

Our curriculum for computing aims to ensure that all pupils can:

1. Understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
2. Analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
3. Evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
4. Be responsible, competent, confident and creative users of information and communication technology

IMPLEMENTATION

Schools have a responsibility to deliver computing to all pupils. Here at Moat Farm Junior School, we ensure that sufficient time is given in order to enable pupils to meet the expectations set, ensuring that the curriculum is coherent and shows progression, particularly across transitions between key stages. A minimum of 5% of curriculum time is allocated to computing; this equates to one hour per week. In addition to 5% of curriculum time, we also dedicate additional time to days/activities such as:

- Safer Internet Day
- Anti-Bullying week (cyber bullying)
- Parental e-safety workshops

We have an e-safety team, who meet half termly to discuss computing needs and issues across school. They also take part in the Childnet film competition every year.

Computing planning is personalised to the needs of our children; it challenges them and builds on previous learning. To further support this, teachers plan activities within each computing lesson following our 'basic, advancing and deep' structure, which runs throughout our wider curriculum.

Our whole-school computing overview ensures that children are given the opportunity to use various technological equipment including: iPads, laptops and cameras. It also ensures that there is progression in learning throughout the year groups. We use applications, such as Purple Mash and Scratch, which allows our pupils to:

- Design and write programs that accomplish specific goals, including controlling or stimulating physical systems, solve problems by decomposing them into smaller parts.
- Use sequence, selections and repetition in programs, work with variables and various forms of input and output, generate appropriate inputs and predicted outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works, 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.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish goals, including collecting, analysing, evaluating and presenting data and information.

IMPACT

At Moat Farm Junior School, we want our computing provision to impact our children in the ways listed below. We want our children to become effective coders and users of technology. In order to achieve that, our children will show:

- A competence in coding for a variety of practical and inventive purposes, including the application of ideas within other subjects.
- The ability to connect with others safely and respectfully, understanding the need to act within the law and with moral and ethical integrity.
- An understanding of the connected nature of devices.
- The ability to communicate ideas well by using applications and devices throughout the curriculum.
- The ability to collect, organise and manipulate data effectively.

We monitor the impact of our computing provision through half termly whole school pupil perceptions, lesson observations, monitoring and evaluations of outcomes.