

COMPUTING

Aims

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

Key stage 2

Pupils should 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, and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

SMSC in Computing

Spiritual

- Promote self-esteem through the presentation of their work to others
- Exploring how ideas in computing have inspired others

Moral

- Encourage respect for other people's views and opinions
- Encourage respect for the equipment and its impact on the environment e.g. ink and paper wastage
- Explore moral issues around digital technology – e.g. copyright and plagiarism

Social

- Encourage children to assist one another
- Encourage good practice and respect in the use of social networking

Cultural

- Encourage the sensible use of digital technology in the classroom and homework situations
- Empowering pupils to apply their Computing skills and knowledge to the wider curriculum and acknowledge links between subjects.