Computing at Billingborough

Computing continues to evolve very quickly and has now become firmly entrenched in many aspects of everyday life, both at home and in the workplace. Computing at Billingborough is to include a wide range of technology for example, iPads, computers, digital cameras, roamer, sensor boxes, etc. Interactive Whiteboards are used as a teaching tool to enhance teaching and learning, increasing pupil motivation and enthusiasm which will lead to further attainment in the use of ICT.

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.

Aims

The aims of computing are:

● Meet the requirements of the Foundation Stage Curriculum and National Curriculum.

● Children, parents, staff, governors and the wider community have relevant and meaningful experiences to ensure all become confident users of ICT.

● Children have a growing awareness of how Computing is used in the world around them and of the benefits that it provides.

● Computing is used to support problem solving and learning across the curriculum.

● Innovative use of resources across the whole curriculum, not just in computing lessons.

● Computing is to be presented as a creative and fascinating process in which children are encouraged to use their own initiative, imagination, reasoning and investigative skills.

● Children appreciate the relevance of Computing in our society, and they see it as an essential tool for learning, communication, finding information and for controlling and understanding their environment.

● Children receive equal opportunity to develop their Computing capability, with learning in computing being planned for in line with its status as a core National Curriculum subject.

● Differentiation is planned for in each area of the Computing curriculum so that children achieve to the best of their ability.

● Children learn to work individually and collaboratively.

Curriculum

The National curriculum: Computing programmes of study outlines the Computing curriculum for key stages 1 and 2.

As a school we subscribe to the Teach Computing Scheme, and we use this scheme to plan in all year groups.

Opportunities for embedded Computing as a tool to support learning and teaching are identified in curriculum planning.

Key Stage 1

During Key Stage 1, pupils will be taught to understand what algorithms are and how they are implemented as programs on digital devices. They will create and debug simple programs and use logical reasoning to predict their behaviour. They will be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content and recognise common uses of information technology beyond school. There will be a focus on how to use technology safely and respectfully, keeping personal information private and identifying where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key Stage 2

During Key Stage 2, pupils will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. They will solve problems by decomposing them into smaller parts and use sequence, selection, and repetition in programs. They will then work with variables and various forms of input and output and use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Pupils will be taught to understand computer networks including the internet and how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. Pupils will use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. They will be taught to 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. Finally, they will be taught how to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Online Safety

Teaching children to stay safe when they are online and using internet enabled devices is really important. We regularly discuss the importance of promoting safe and effective use of the internet.

National Online Safety have produced helpful guides for school, parents and carers to explain how we can keep children safe on devices and apps.