Intent

All pupils at Naunton Park Primary School have the right to have rich, deep learning experiences that balance all the aspects of computing. With technology playing such a significant role in society today, we believe 'Computational thinking' is a skill children must be taught if they are to be able to participate effectively and safely in this digital world. A high-quality computing education equips pupils to use creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. At this school, the core of computing is Computer Science in which pupils are introduced to a wide range of technology, including laptops, iPads and interactive whiteboards, allowing them to continually practice and improve the skills they learn. This ensures they become digitally literate so that they are able to express themselves and develop their ideas through information and computer technology. Through teaching Computing, we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. It is our intention to enable children to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. We want children to know more, remember more and understand more in computing so that they leave primary school computer literate. Computing skills are a major factor in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to allow them to achieve this.

The intent of our Computing is to:

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

By the end of Key Stage 1 our children will learn to

1. understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
2. create and debug simple programs
3. use logical reasoning to predict the behaviour of simple programs
4. use technology purposefully to create, organise, store, manipulate and retrieve digital content
5. recognise common uses of information technology beyond school
6. use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

By the end of Key Stage 2 our children will learn to

1. design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
2. use sequence, selection, and repetition in programs; work with variables and various forms of input and output
3. use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
4. 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
5. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

6. 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
7. use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Implementation

Teaching of computing will take place at least once fortnightly. There will also be a focus on Computing and technology during the 'STEMTASTIC' learning week in Term 6.

We have a bank of 31 laptops which can be booked by teachers in advance. There are also 16 iPads which can also be booked out. In addition, each class has at least one iPad (usually kept by the teacher) and classes in KS1 have several iPads and some have laptops for supporting the teaching of other subjects and for 'structured play'.

We follow the 'Purple Mash' scheme in board terms but where topic/themed work can be incorporated into lessons or where there is specific software, apps or websites that are more appropriate, teachers are free to adapt the scheme to provide a more well-rounded, exciting and valuable learning experience.

There will also be a considerable amount of learning that takes place outside of lessons where a secondary learning aim of the lesson supports or revises skills that have been taught in Computing lessons.

The teaching of this subject will be adapted as required to enable children with SEND to access this area of the curriculum, in line with their individual needs and through liaison with the school SENDCo.

Impact

The impact of children's progress and attainment in Computing will be measured through:

- Pupil Conferencing – pupils' enjoyment, interest, participation, confidence, preferences, opinions about lessons, resources and opportunities;
- Observations – teaching skills, pupils' learning, curriculum coverage, curriculum progression, teachers' skills audit;
- Planning scrutiny – curriculum coverage and progression, adaptation to pupils' needs;
- To what extent is Computing used to support learning in other subject areas;
- Audit and use of resources available to children for lessons other than Computing.