Computing Policy
Reviewed September 2020

As the digital world around us rapidly changes and more and more technological advances are made it is important for our pupils to be able to active participants and gain the transferable skills, be digitally literate and have a strong understanding of how to create their own programs, systems and digital content. It is also of the utmost important that the pupils of Robsack Wood are able to apply their knowledge and skills in ways that are safe and appropriate for themselves and others.

Aims and Purposes

The national curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles and concepts of computing, 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 technology.

Teaching and Learning

As the aims of computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in computing is for individuals or groups of children to use computers to help them in whatever they are trying to study. For example, children might investigate a particular issue on the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of computing can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text about etc.

We recognise that all classes have children with widely differing abilities in information technology. This is especially true when some children have access to IT equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways, by:

Our pupils learn:

- How to be safe when using electronic technologies
- How to check the reliability of electronic information
- To understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- To code and use control technologies.
- To develop critical, problem-solving computational thinking
- To use a wide range of Information Technology applications to process text, images and data.

- To become responsible, respectful and competent users of data, information and communication technology.

Curriculum Planning

At Robsack Wood we use the National Curriculum alongside Purple Mash software which informs the planning and teaching of computing within the academy. Through our teaching we aim for all children to be competent in the following skills by the time they leave the academy at the end of Year 6:

By the end of the Early Years, most children will be able to:

- Complete a simple program on a computer
- Use ICT hardware to interact with age-appropriate computer software

By the end of Key Stage One, most children will be able 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
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- 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 Two, most children will be able 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.

Policy Status and Review

Written by:	Computing Subject Leader
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