

Computing Intent, Implementation and Impact
Collingtree CE Primary School

'Everyone should know how to program a computer because it teaches you how to think'
Steve Jobs

Intent (the what)

In order that our pupils are able to “live life in all its fullness” we recognise the importance of their digital literacy in this increasingly digital age. In order that they will be able to fulfil a vast array of job roles in the future, their computing skills will become vital. We acknowledge that a strong understanding of digital literacy is critical to future achievement, as is a good knowledge of how use technology safely and responsibly.

Specifically, we intend that our pupils can:

- 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

Implementation (the how)

Our teaching of Computing is delivered using the Purple Mash scheme of work in combination with our school designed programme of study linked to online safety and developing essential IT skills. This scheme has been carefully and specifically chosen because it provides all the elements of the National Curriculum for Computing in one, easy to use software package whilst complementing our essential skills programme. It also provides pupils with the opportunity to extend their learning beyond the classroom, e.g. coding at home.

Specifically, KS1 children will learn 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

In KS2 children will learn 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.

See the Computing Long Term Plan for specific detail.

Impact

We expect the vast majority of children to achieve the national curriculum age-expected standards at the end of each academic phase of teaching (Y1/2, Y3/4 and Y5/6). These standards (detailed in the national curriculum) summarise the knowledge, skills and understanding that children should have gained.