



Cartmel CE Primary School

Computing Policy

The Governing Body adopted this policy: 6th November 2017

Approved by: Dorothy Milner

Review date: November 2020

Mission Statement

'Mighty Oaks from Little Acorns Grow'

We will do our best, be happy and honest, show respect and be friendly. At Cartmel we create a happy caring environment based on Christian Values, where we value every child and encourage them to strive for their highest standards of achievement. We ensure that our young people go into the world as confident, independent, responsible citizens with a love for learning.

Our Mission Statement pays homage to our conviction that there is something potentially wonderful in every individual.

The aim of this policy...

- Provide a relevant, challenging and enjoyable curriculum for Computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for computing.

- Use computing as a tool to enhance learning throughout the curriculum.
- To equip pupils with the confidence and capability to use computing throughout their later life.
- To develop the understanding of how to use computing safely and responsibly.

The national curriculum for computing has four main 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.

Assessment

By the end of each Key Stage, pupils are expected to know, apply and understand the matters, skills and processes outlined in the relevant programme of study.

Key Stage 1

By the end of Key Stage 1 children should 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
- Use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet
- Recognise common uses of information technology beyond school

Key Stage 2

By the end of Key Stage 2 children should 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 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
- Use technology safely, respectfully and responsibly; know a range of ways to report concerns and inappropriate behaviour
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Resources, access and inclusion

The school acknowledges the need to continually maintain, update and develop its resources. We have access to computers, laptops or Ipads in all classrooms, in order to deliver the computing curriculum and make cross curricular use of technology. Teachers are required to inform the IT support service (currently System IT) of any faults as soon as they are noticed.

In school we have:

- A central network for the storage of both children's and staff's files.
- A bank of 10 computers located in Class 3.
- A laptop hub of 15 machines located in Class 2.
- 15 Ipads, with a class login for the Apple store
- A smart whiteboard and projector connected to a teacher's laptop/desktop computer in each class.

We also have a link governor who works within the IT industry who is available for guidance and support.

At Cartmel CE Primary, we plan for all our students to achieve. To support this we will:

- Provide suitable learning opportunities for all pupils by matching the challenge of the task to the individual needs and abilities of each pupil.
- Making reasonable adjustments to the way in which we deliver the computing curriculum, such as providing transcripts of online learning videos to pupils with hearing impairments, or making resources available in a pupil's first language where they use English as an additional language.
- Assigning classroom assistants to individual/groups of pupils, where appropriate, to enable greater one-to-one support.

Monitoring and Reviewing

The monitoring of standards with regards to children's work is the responsibility of the class teacher, who will report back to the subject leader. The subject leader is also responsible for supporting colleagues in the teaching of computing, for keeping them informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The subject leader should give the head teacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement.

Glossary of Terms:

Abstraction

Only focussing on the details relevant to the task, in computing this may be by using a database to handle data. In doing this the data can be looked at in specific groups.

Logic

The non-arithmetic operations performed by a computer, such as sorting, comparing, and matching, that involve yes-no decisions. This might be completed using programs such as Excel or Flowol.

Algorithms

The step-by-step procedure for a machine to complete a task, for example the instructions given to a pro-bot to guide it round a track, or the instructions put into a bee-bot to guide it through a maze.

Data Representation

The way in which information is presented. In its simplest form this could be representing a data set as a graph. However, it is also using the appropriate software for the task. Not everything has to be done in Word or PowerPoint.