# CARNFORTH COMMUNITY PRIMARY SCHOOL

## Computing Policy

### Intent

At Carnforth Community Primary School, in line with the National Curriculum for computing, we believe a high-quality computing education equips pupils to use computational thinking and 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 Carnforth Community Primary School, we understand that the use of information and communication technology is an integral part of the National Curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information.

At Carnforth Community Primary School, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.

In line with the National Curriculum (2014), the Computing curriculum at Carnforth Community 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.

## Implementation

• Computing at Carnforth Community Primary School is taught every half term, making sure that there is a focus on Online Safety, which plays a major part in our children's lives. We use Project EVOLVE – Education for a Connected World resources to plan and assess lessons involving Online Safety. We have used our expertise within school to teach the coding part of the curriculum with the subject leader taking this responsibility.

### Online Safety

As part of our Online Safety policy at Carnforth Community Primary School we ensure that: -

• All pupils are able to develop skills to keep them safe online.

• Opportunities for learning about Online Safety are part of our Computing and RSE lessons and are reinforced whenever technology is used.

• Clear rules for Online Safety are agreed by each class at the beginning of every year.

• Our school supports the international Safer Internet Day each February.

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.

**RECEPTION**

It is important in the foundation stage to give children a broad, play-based experience of computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature computing scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or program a toy.

Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

**KEY STAGE 1**

Pupils should be taught 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.

**KEY STAGE 2**

Pupils should be taught 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.

**Teaching and learning coverage:**

| Pupils should be taught about: | |
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| Key stage 1 | |
| Autumn 1 | Self-Image and identity,<br>Health well-being and lifestyle<br>Using an iPad including photo and video manipulation<br>Presentation skills |
| Autumn2 | Online Relationships<br>Data Handling |
| Spring 1 | Managing Online information<br>Unplugged Programming |
| Spring 2 | Online Bullying<br>Programming toys<br>Turtle logo/Scratch |
| Summer 1 | Online reputation<br>Scratch junior |
| Summer 2 | Copyright and ownership<br>Privacy and security<br>Data organising |
| Lower Key Stage 2 | |
| Autumn 1 | Self-image and identity<br>Health, wellbeing and lifestyle |
| Autumn2 | Online relationships<br>Pictograms Word processing |
| Spring 1 | Managing Online information<br>Emailing |

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| | Cyber bullying |
| Spring 2 | Online bullying<br>Networks sharing information and the internet |
| Summer 1 | Online reputation<br>Scratch |
| Summer 2 | Copyright and ownership<br>Privacy and security |
| Upper Key Stage 2 | |
| Autumn 1 | Self-image and identity<br>Health, wellbeing and lifestyle<br>Purpose of programming |
| Autumn2 | Online relationships<br>Photography and digital art |
| Spring 1 | Managing Online information<br>Bletchley Park – Code breaking and password hacking |
| Spring 2 | Online bullying<br>Bletchley Park – first computers |
| Summer 1 | Online reputation<br>Power Points and presentations |
| Summer 2 | Copyright and ownership<br>Privacy and security<br>Programming – Music programming |

**IMPACT**

At Carnforth Community Primary School, our Computing Curriculum has been structured to demonstrate a progression of skills and ensures that children can build on their understanding, as each new concept and skill is taught with opportunities for children to revisit skills and knowledge as they progress through school.

Teachers assess children's knowledge, understanding and skills in Computing by making observations, through conversations with the children during lessons and looking at the work that children have saved in their individual folders on the computer. Built into the activities are several points where the teacher can assess and take stock of the children's progress, then provide feedback.

At the end of each half term the class teacher makes a judgement as to whether a child is working at the level, working towards the expected level or working at a Greater Depth (achieving above). This data is given to the subject leader to track.

We measure the impact of our curriculum through the following methods:

• Learning walks

• Scrutiny of digital portfolios

• Pupil discussions about their learning, which includes discussion of their thoughts, ideas, processing and evaluations of work.

By the end of a pupil's time at Carnforth Community, we want our children in Computing to:

Know, apply and understand the matters, skills and processes specified in the relevant programme of study