Broomhill Infant School **Computing Curriculum Coverage Long Term Plan**

Curriculum Design for Computing

Computing Intent

Within an ever changing and technological world, Broomhill Infant School understands and values the importance of teaching Computing from a young age. We acknowledge that future generations will rely heavily on their computational confidence and digital skills in order to support their progress within their chosen career paths. Therefore, it is our school's aim to equip children with the relevant skills and knowledge that is required to understand the three core areas of Computing (Computer Science, Information Technology and Digital Literacy) and to offer a broad and balanced approach to providing quality first teaching of this subject. Computing is an integral part to a child's education and everyday life. Therefore, we intend to support our pupils' access and understand the core principles of this subject through engaging and cross- curricular opportunities.

Computing Implementation

The computing curriculum is based on the scheme designed by the NCCE and supplemented by the use of the Purple mash learning platform. It is continuously reviewed through monitoring and evaluation by the Subject Leader and SLT. The Computing Subject Leader currently covers teacher PPA time and teaches Computing in each class with a high level of enthusiasm for the subject content. Expectations of the pupils are driven by subject progression, with the three core areas of Computing in mind: **Computer Science**: The understanding of coding and programming across a range of physical devices and digital resources. **Information Technology:** The range of skills required to operate and manipulate specific programs, systems and content. **Digital Literacy:** The knowledge required to use technology safely and to evaluate and react to any potential risks of the online/ digital world. Lessons expose students to a variety of software, programs and equipment to offer a range of experiences. We have a portable set of Chromebooks, laptops and programmable toys which are used to teach the Computing curriculum in classrooms.

Computing Impact

The success of the curriculum will be assessed via progress grids, pupil voice sessions and lesson drop ins by the SLT. Pupils at Broomhill Infant School should: Be enthusiastic and confident in their approach towards Computing, present as 'computational thinkers,' be able to identify problems and work methodically to debug them, create and evaluate their own project work and know about the positive applications and specific risks associated with a broad range of digital technology. Pupils will transition to junior school at the end of year 2 with a good set of skills and a keen interest in the continued learning of this subject.

Progression of Knowledge

	Year 1	Year 2	Year 3 (NCCE)
Long Enquiry	Creating media: Digital painting, digital writing. Programming: Moving a robot, animations.	Creating media: Digital photography, digital music. Programming: Robot algorithms, quizzes.	Creating media: Stop frame animation, desktop publishing. Programming: Sequencing sounds, events and actions in programs.
Short Enquiry	Computing systems and networks: Technology around us. Data and information: Grouping data.	Computing systems and networks: IT around us. Data and information: Pictograms.	Computing systems and networks: Connecting computers. Data and information: Branching databases.
End point	**By the end of Key Stage 1, children will have:** ✓ Experienced a range of hardware such as Chromebooks, laptops and programmable toys. ✓ Learnt how to create a simple program and develop the knowledge of how to debug a simple algorithm. ✓ Created and sorted data into visual representation using specific software. ✓ Experience of creating blocks of code for a practical purpose.		**By the end of Year 3, children will have:** ✓ Create a stop animation frame using a new software. ✓ Develop their knowledge of how computer systems work and are connected together through networks. ✓ Develop their understanding of patterns in algorithms and be able to loop sequences of code for a specific purpose.

Disciplinary Knowledge

	Digital Literacy		Information Technology		Computer Science		Analyse and Evaluate
EYFS	Discuss with a peer how to use a device. Begin to talk about internet safety. Explore a range of technology.	EYFS	Use ICT hardware to interact with ageappropriate computer software Begin to independently take photographs and videos. Use a piece of software with a peer. Can create content such as a video recording, stories, and/or draw a picture on screen	EYFS	Understand how a command gives an outcome. Completes a simple program on electronic devices	EYFS	With support, analyse how to fix a technological problem. Explain how they were successful with a piece of technology.

KS1	Recognise different uses of technology. Explain the rules of technology at school/ home to keep safe. Seek support from an adult when navigating online when encountering something worrying. Explore unfamiliar software by making connections with familiar software and technology.	KS1	Design a simple programme for a specific purpose. Create images using specific software. Work with others in designated role to contribute towards a specific outcome. Pick a specific design element to impact an outcome. Begin to recognise that specific tools will impact/contribute towards my design.	KS1	Explain what an algorithm is. Modify an algorithm for a specific outcome. Begin to recognise patterns in an algorithm. With support, decompose an algorithm into its simple functions.	KS1	Begin to analyse potential problems and software and explain solutions to fixing them. Make predictions about a simple sequence of commands. Begin to debug algorithms. Evaluate the effectiveness of my work and suggest improvements.