Limehurst Primary School

Subject Leader Report: Computing by Melanie Atherton

INTENTION: Subject Overview

At Limehurst, we aim to deliver a high-quality computing education to equip all our pupils, irrespective of their skills, background and additional needs, 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. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Our aim is to provide a curriculum that ensures that every child:

- **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.**
- **is responsible, competent, confident and a creative user of information and communication technology.**

IMPLEMENTATION: Planning, sequencing and skills progression

At Limehurst Primary School, our curriculum is planned to engage and excite all pupils. Teachers plan lessons following the Teach Computing Curriculum (http://ncce.io/tcc) , which provides full coverage of the computing curriculum from key stage 1 to 4. The Teach Computing Curriculum enables teachers to teach computing with confidence, following step by step lesson plans and access to all the resources they need to teach computing, in one place. The units for key stage 1 and 2 are based on a spiral curriculum, ensuring that pupils revisit, consolidate and build on prior learning within a theme. Computing is taught both as a discrete subject, and cross-curricular when the opportunity presents itself.

IMPLEMENTATION and IMPACT: Assessment, monitoring and evidence

Every computing lesson is planned to include formative assessment opportunities, varying from teacher observation or questioning to marked activities. These opportunities ensure that misconceptions are recognised and addressed quickly when they occur.

Every unit includes a summative assessment in the form of either a multiple-choice quiz or a rubric. In computing we want to ensure we are assessing understanding of computing concepts and skills rather than reading and writing skills. The summative assessments will inform teacher judgements around what pupils have understood in each computing unit.

Pupils save their work in class folders on the public network, making it easily accessible to class teachers, the computing lead and SLT.

Other Key Information if applicable (subject specific)

Enrichment opportunities

Every class has timetabled access to 30 laptops or iPads. EYFS pupils have access to Ipads, laptops, Beebots and remote control cars. All of our pupils are given opportunities to use and develop their computing skills in context through cross-curricular work. After school coding clubs, led by a specialist, are available to KS2 children, throughout the year. Every year, as a school, we celebrate and promote the annual Safer Internet Day with our pupils and parents.

Computing overview at Limehurst:

	Computing systems and networks	Creating media	Programming A	Data and information	Creating media	Programming B
Year 1	Technology around us	Digital painting	Moving a robot	Grouping data	Digital writing	Programming animations
Year 2	IT around us	Digital photography	Robot algorithms	Pictograms	Digital music	Programming quizzes
Year 3	Connecting computers	Stop frame animation	Sequencing sounds	Branching databases	Desktop publishing	Events and actions in programs
Year 4	The Internet	Audio production	Repetition in shapes	Data logging	Photo editing	Repetition in games
Year 5	Systems and searching	Video production	Selection in physical computing	Flat-file databases	Introduction to vector graphics	Selection in quizzes
Year 6	Communication and collaboration	Web page creation	Variables in games	Introduction to spreadsheets	3D Modelling	Sensing movement

Next steps

INTENT	IMPLEMENTATION	IMPACT
Monitor, assess and support the use of Teach Computing across KS1 and 2.	**Discussions with staff, children and parents. Observation of pupils' work. Staff CPD as necessary.**	**Teach computing to be successfully utilised throughout. Staff to be supported when required.**
Elect a number of children, from each KS2 class to train to become digital leaders.	**Digital leaders are pupil monitors for the technology that is used in the school. They are pupils who are skilled in using technology.**	**Digital leaders are able to share their skills with others, modelling good practise to their peers.**