Computing Policy

St Luke's Primary School

'Love God. Love your neighbour as yourself: be the Good Samaritan. Luke 10:25-37

OUR AMBITION:

To provide high-quality computing education that enables and equips pupils to use computational thinking and creativity to understand and impact upon the world. Computing and computer science in our school has close links with other subjects such as mathematics, science, and design and technology. We teach pupils how to become digitally literate- able to use, and express themselves and develop their ideas through information and communication technology. We endeavour to teach pupils the principals of information and computation, how digital systems work, and how to put this knowledge to work. Our ambition is that through knowing programming and building on knowledge as pupils go through the school that they are digitally ready for secondary school and indeed for the future workplace and active participants in a digital world.

OUR AIMS:

- Are to develop, maintain and stimulate pupils' curiosity, interest and enjoyment in computing and to encourage them to have open, enquiring minds and to perceive computing in the context of a wider body of knowledge.
- To base the curriculum on the Computing section of the National Curriculum so pupils understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- To ensure pupils become autonomous users of ICT with the associated skills in analysing problems in computational terms, and have repeated practical experiences of writing computer programs in order to solve such problems supporting lifelong study and the pursuit of personal interest as well as the world of work.
- That pupils can evaluate and apply information technology, including new or unfamiliar technologies and analytically solve problems.
- Overall, that pupils are responsible, competent, confident, creative and safe users of information and communication technology.

CURRICULUM RATIONALE:

We use the Islington Local Education Authority's scheme of work because it is innovative and it covers the attainment targets and programs of study set out in the National Curriculum. We make full use of the London Grid for Learning resources too. Our curriculum rationale is:

- To enable pupils to acquire appropriate, transferable computing skills, knowledge and understanding so they have a basic level of computing capability which can be applied across the curriculum.
- To enable all pupils to have equal access to ICT and to experience success in their work.
- To enable pupils to develop a range of desirable personal qualities such as online safety, politeness, perseverance, concern for others, initiative and independence.
- To support all staff to develop confidence and strategies in using ICT within their teaching by:
  a) providing an ongoing INSET programme for staff appropriate to their needs, their pupils' needs and the needs of the curriculum (this includes time allocated through our buy-in of Hands- On Support from Islington)
  b) offering bespoke support to staff especially around delivering computer science.

All teachers use ICT to facilitate the delivery of all aspects of the curriculum.

CURRICULUM ROLL-OUT

The Knowledge and Skills Progression Map for computing lays out the expected coverage from EYFS to Year 6. The Islington Curriculum Resource are used as the basic core for teaching computing. The curriculum is designed to be sequential, building on areas worked on in previous years, allowing children to build on their previous skills and allowing peer to peer support across many areas of the curriculum.

We have a specialist HLTA who has been trained in working with teachers to deliver the computing curriculum. In addition to subject specific computing, pupils are encouraged to use the skills and knowledge acquired across the curriculum to enhance their work. All teachers support the skills-based computing lessons by providing opportunities to reinforce and consolidate their skills in other curricular areas. There are a number of opportunities for computing within the curriculum: one session timetabled for discrete skills and many others for cross curricular work.

To support the progression of skills for our pupils, we endeavour to:

- expose pupils to the use of computing in as many subjects and contexts as possible, including extensive use of Interactive Whiteboards, iPads, laptops and other kit when applicable
- ensure they become autonomous users of ICT with the associated skills in analysing problems in computational terms so they can experience writing their own computer programs as part of the challenge to solve problems.
- use a wide and expanding range of software and ICT equipment as is appropriate
- encourage pupils to recognise the transferable nature of their computing capability and thereby have confidence when using new software or when using familiar software in a new context

All staff actively celebrate effort and achievement in all areas for all pupils, and pupils can celebrate good work through displays throughout the school, class assemblies and the sharing of good practice.

We believe that guidance is important as pupils begin to learn to take responsibility for all their work and progress. We ensure work is sufficiently challenging, fully accessible, meeting the needs of all individuals and provide a balance between teacher-directed and self-directed work.

Teachers encourage discussion and sharing of ideas and lessons are conducted in a calm respectful atmosphere conducive to pupils demonstrating new techniques to staff and to “take chances” with their work without fear of ridicule or feelings of failure. Involving pupils in their learning helps to foster independent thinking.

We actively look for opportunities to collaborate with other organisations to widen children’s exposure to computing knowledge and skills; e.g. 3 Discovery Centre, Soap Box.

EARLY YEARS

We use the EYFS Computational Thinking Skills to deliver Early Learning Goals. This includes tinkering-play and exploring, making things-checking and fixing things, collaboration-playing and working collaboratively, persevering, logical reasoning- anticipation and exploring and pattern- grouping things, comparing, spotting similarities and differences and working out rules. The Knowledge and Skills Progression map shows the journey of digital literacy, digital media to create, share and respond, multimedia and digital writing and IT data from early years to year 6.

SEND PUPILS

We give pupils with individual needs access to appropriate computing equipment to enhance their learning and skills and improve their access to the National Curriculum, including the Computing programmes of study. We actively encourage and build their confidence levels and skills so they become independent. Teachers adopt a wide range of teaching and learning styles within a course of study so all pupils have access to the curriculum.

No child will be prevented from taking part in any of the computing activities because of his/her gender, culture, social background, ability or disability. Children know about The Protected Characteristics and the importance of respect and equality.

Teachers work hard to share ideas to maximise their expertise in exploiting the potential of computing in scaffolding tasks so they are accessible to all pupils. We take advice from outside professionals which is continuously evolving.

MORE ABLE AND SKILLED

We identify our more able and skilled children as well as those with a real interest in computing and aim to provide them with opportunities to build on their skills both within school and outside of school. We have an active Young Digital Leaders group of pupils from Y2 to Y6 who meet the ICT subject leader at least once a month. This gives pupils the opportunity to express their views of what they are learning, how much they are using and applying and remembering. Pupils have a unique perspective which we respect and very often follow-through on their ideas which can be innovative.

E- SAFETY

Online safety is of paramount importance and it links closely with the PSHE curriculum. The Online Safety Scheme of Work ensures children have the tools to stay safe online. This is reviewed annually to ensure lessons are up-to-date. Pupils are educated in the hazards of smart phones and devices they may have as well as new and emerging technologies to enable them to make informed choices that will affect their personal safety and online reputation. We respond to any on-line incidents that may happen outside of school hours and work in partnership with parents. We actively encourage parents to monitor their child's use of ICT at home. We strive to educate all adults in the school, pupils and parents in appropriate online behaviour through INSET, lessons, assemblies, literature, and open days for parents not just once a year on Safer Internet day/ week but throughout the year.

ASSESSMENT

Key skills, knowledge and understanding are assessed formatively week by week and at the end of each topic. Assessment in computing is primarily through ongoing observation of children's learning and formative assessment methods including discussion with children, questioning, revisiting and assessing prior learning, reviewing children's learning in lessons, observation of skills during lessons and evaluation of work in computing folders / saved on the school server.

Those children who have not met the intended outcomes of a lesson, then receive in class support from the class teacher or further support from their peers, thus giving a clear focus on supporting the needs of individual children.

RESOURCES

We have a wide range of resources available to support the teaching of computing including a class set of lap tops, a class set of i-pads and Chrome Books. In addition, there is a variety of peripheral

equipment available for general use including: digital cameras, visualisers, data- logging equipment and bee-bots. Each class has a teacher i-pad for assessment and teaching. We have the appropriate resources (software, hardware and peripherals) to enable progression and continuity and make full use of the ICT equipment with respect to:

- The capabilities of the hardware;
- The amount of use;
- Making use of any possible expansion capability.

This includes the upgrading of the hardware and software where needed and when manageable. We pay for a specialist IT engineer one day a week to manage resources.

STAFF DEVELOPMENT AND EXPERTISE

There is a computing subject leader who receives training from the LA experts and who works in partnership with the computing lead in Moreland school with whom we are in a federation. He supports all subject leaders to take responsibility for computing and lead on how to make use of ICT skills and techniques across their subject areas. School wide and individual training is allocated on the basis of school and staff audits. Teachers receive CPD in teaching computing including working alongside experienced teachers and external organisations. The school buys into "Hands on Support" Islington which consists of staff training and pupil projects. The leader attends additional CPD which is disseminated to teachers.

The rate of development within computing is rapid and appears set to continue for the foreseeable future. For both schools to maintain realistic goals as to how it is to maintain progress within computing, all teachers must see its development as part of their role.

MONITORING AND EVALUATION

The computing subject leader takes responsibility, alongside the senior leadership team, for monitoring the quality of teaching and learning in computing through regular observations and discussions with children and the staff team. The subject leader works closely with outside professionals especially Islington LA and organisations as appropriate to develop the curriculum offer and co-ordinate resources and extra- curricular opportunities.
We appreciate and value feedback from all sources, including parents, children, governors etc. and will aim to accommodate any suggestions made if practicable and viable.

CURRICULUM OUTCOME

Our aim is that by the end of key stage 1 and key stage 2 that pupils know, apply and understand the matters, skills and processes specified in the Computing programmes of study- the National Curriculum. At the end of key stage 2 they are expected 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 by coding and exploring Scratch coding software, creating games and solving problems using the software

-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

After the implementation of this computing curriculum, children at St. Luke's will be digitally literate and able to join the rest of the world on its digital platform. They will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but crucially, to use it safely. The biggest outcome that we want on our children is that they understand the consequences of using the internet and that they are also aware of how to keep themselves safe online.

As pupils become more confident in their abilities in computing, they will become more independent. Learning for Life is an on-going strategy in St Luke's and key life skills such as keeping themselves safe on-line, problem-solving, logical thinking and self-evaluation are expected to become second nature.

Our expectations of our children and for our children are high and we strive to best equip children for use of the technology throughout their lives both academically, professionally and socially.

R**eviewed By: Keith Grey March 2023**

To be reviewed: March 2024