Computing and Digital Literacy Policy

New End Primary School

Date Amended: **Autumn Term 2023**

Review Date: **Spring Term 2025**

Rationale

New End is a primary school with a two-form entry. There is a nursery unit within the site, so the school caters for children between the ages of 3 and 11. New End is a multicultural urban school with children from a wide social background and with a broad range of ability, including children with a statement of Special Educational Needs and Disabilities and those who speak English as a second language.

At New End we teach the computing curriculum in a unique way, with the majority of the content being delivered through a range of coding activities.

Aims

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.

Governor and Staff Responsibility

Role of the Governing Body:

- ensure that there is a link governor responsible for Computing and Digital Literacy, who will meet regularly with the Computing and Digital Literacy subject leader
- ensure that arrangements for the teaching of Computing and Digital Literacy throughout the school are regularly reviewed and agreed.

Role of the Headteacher

- determines the ways ICT should support, enrich and extend the curriculum;
- Ensuring INSET, when appropriate;
- Providing a budget for sufficient resources;
- Enabling the Computing and Digital Literacy Leader of Teaching and Learning to work alongside other staff, where appropriate;
- Liaising with staff about record keeping and assessment;
- Ensure the monitoring of teaching and learning through lesson observations and intake of Computing and Digital Literacy outcomes across the school;
- Reporting to Governors, where appropriate, about the development of Computing and Digital Literacy and progress made.

Role of the Specialist Computing and Digital Literacy Teacher:

- teach computing to pupils from Reception to Year 6.
- support and encourage colleagues and help develop expertise and confidence in the teaching of Computing and Digital Literacy throughout the school;
- promote the integration of ICT within appropriate teaching and learning activities
- manage the provision and deployment of resources and give guidance on classroom organisation;
- keep up to date with developments in Computing and Digital Literacy teaching;
- encourage use of ICT as appropriate in teaching/motivating pupils;
- use the Computing and Digital Literacy budget to buy appropriate resources and equipment;
- collect and maintain resources and ensure accessibility;
- act as a contact point between the school and support agencies;
- provide limited technical expertise and/or request LEA technician support;
- contribute to in-service training of staff.
- co-ordinate the evaluation and review of the school's ICT policy;
- create and follow a yearly action plan;
- liaise regularly with the link governor to update them on progress.

Role of the Class Teacher:

- ensure Computing and Digital Literacy is taught in line with the National Curriculum

- promote the integration of ICT within appropriate teaching and learning activities, develop and monitor the contributions of subjects to its cross-curricular use;
- record and assesses the children's outcomes in line with agreed Computing and Digital Literacy procedures;
- report on children's progress in Computing and Digital Literacy in annual reports;
- attend INSET, when necessary;
- liaise with and work alongside the Specialist Computing and Digital Literacy Teacher, when appropriate.

Organisation

By the end of each Key Stage, pupils are expected to know, apply and understand the matters, skills and processes outlined in the New National Curriculum Computing Programme of Study (see below).

New End has a specialist computing teacher who works in Reception and throughout Key Stage One and Key Stage Two every week. These lessons focus on coding and robotics. Classes receive 45 minutes in KS1 and one hour a week teaching input by the specialist teacher. Class teachers and support staff remain in some of these lessons in order to enhance their personal computing skills.

Our Scheme of Work ensures the National Curriculum is covered thoroughly, but with a big focus on Coding. Where a concept can be taught meaningfully by a coding activity this is done. For example pupils learn to edit text by coding simple apps, rather than by word processing. Instead of drawing pictures on a computer and printing them out, they learn to use code to make their pictures move. They search for information online but re-use elements to create their own web pages using HTML.

Our Scheme of Work evolves as pupils become better at coding, and as we find new ways to teach things more effectively. For example, we used to teach Y6 pupils how to send code to a *Micro:bit* controller; we now start teaching this in Y2 and Y3. New resources also make things simpler - our pupils in Reception are now using simple loops to repeat sections of code although we used to introduce this in Y2. This can present problems for new pupils joining the school. Our coding website newend.net supports new arrivals who need help to catch up with their peers. Teaching videos and online activities makes learning core concepts available to all pupils at home.

Pupils in KS2 are also taught to use Google Docs and Google Classroom so they can use these skills across other subjects in the curriculum.

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

Internet

The advent of the World Wide Web is having a huge impact upon the teaching and use of ICT within schools. It facilitates the access of information via libraries and other establishments across the globe. We make use of the internet in many lessons.

- the school subscribes to the LEA Managed Internet service. This ensures shielded access;
- children across the school are accessing the internet and are encouraged to visit sites of significant educational importance;
- teaching staff are proficient at using the internet and are able to use these skills at home and school;
- the school has established its own web site (www.newend.camden.sch.uk)

We have a separate policy for the acceptable use of the internet.

Staff Development

It is important that teachers and classroom assistants have ICT capabilities in order to deliver the new computing national curriculum to the pupils. ICT is constantly changing and developing; leaders will discuss with colleagues their training needs and encourage them to attend relevant courses or plan whole staff INSET. Ongoing INSET and twilight INSET is regularly planned and delivered.

Assessment

ICT is assessed both formatively and summatively using the New National Curriculum Computing Programme of Study. Formative assessment occurs on a lesson by lesson basis based on the skills and processes outlined in the New National Curriculum Computing Programme of Study. These are conducted informally by the class teacher and are used to inform future planning.

Extra Curricular Activities

An after school club is also offered by the specialist computing teacher. The age focus changes every term.

Resources

Hardware is stored in locked trolleys in different locations across the school including the Headteacher's office. Reference materials are centrally stored in the Digital Literacy folder of the school's shared network. Each year group has Computing and Digital Literacy teaching and assessment resources in the Digital Literacy folder on the school's shared network which are year group appropriate.

ICT and Computing and Digital Literacy

Pupils should be provided with opportunities to access Computing and Digital Literacy resources using Chromebooks in KS1 and KS2 and iPads in EYFS. Teachers use a diverse range of online opportunities for Computing and Digital Literacy through ICT including Google Classroom in Key Stage 2.

Equal Opportunities and Racial Equality

Technology has become an everyday part of life for the children in our schools. It is important that all children, girls and boys, those with low attainments and those with high attainments, irrespective of ethnic and social background, feel comfortable with it. Technology can play an important role in language development, project work, problem solving and investigations. Priority will be given to ensure equality of access and quality of experience for all pupils irrespective of race, gender, disability, age or class to develop their own level of ICT capability. We must ensure that all our pupils:

- have access to ICT resources which reflect a wide range of cultural and religious beliefs;
- have equal opportunities to develop ICT capability;
- use software which is appropriate to their ability;
- planning takes account of pupils for whom English is an additional language and appropriate support is given. Teachers are aware that the ability of EAL pupils to take part in ICT activities may be ahead of their communication skills in English.

Pupils with Special Educational Needs and Disabilities

All teachers will have in their class some children whose progress warrants special consideration. Their difficulties may have physical, sensory, behavioural, emotional or neurological causes, or may stem from a legacy of poor learning that inhibits their current learning.

Teachers should aim to include all these pupils fully in Computing and Digital Literacy lessons.

Gifted and Talented

Children demonstrating a particular ability in Computing and Digital Literacy should continue to be supported in achieving higher standards through extension activities provided in lessons and extra curricular activities. The school should also ensure that where offered, children with particular aptitudes should have access to outside opportunities.

Pupils with English as an Additional Language

At New End we have a large number of children who have English as an Additional Language. These children must all be encouraged and assisted to reach their potential in Computing and Digital Literacy. See note above.

Health and Safety

It is imperative that all electrical equipment is kept in good working order. To ensure the health and safety of pupils and staff, the following guidelines must be adhered to:

- equipment should be situated away from water;
- pupils should always be supervised when using electrical equipment;
- all plugs, leads and equipment should be checked regularly and tested for electrical safety in accordance with LEA guidelines;
- pupils should not be allowed to carry heavy equipment;
- appropriate seating and work surface heights should be consistent with the size of pupils using them;
- adequate levels of lighting and ventilation should be ensured at all times.

Monitoring and Evaluating Policy and Practice

This policy will be reviewed annually by the Computing and Digital Literacy Leader of Teaching and Learning and discussed with staff, parents, governors and children to consult on future developments as widely as possible.

Information collected during monitoring is used to inform future planning and development priorities.