



Kington Primary School

Computing Policy



Our School Vision

Developing caring, confident and creative children who achieve excellence.

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The Importance of Computing

The importance of Computing as a subject has never been greater, as more and more of our lives become digitalised. It is essential that children are brought up alongside technology so that it becomes embedded into their day-to-day lives, improving their efficiency and breadth of learning. Using these skills, the next generation will be able to further improve technology and improve the lives of others.

Children will need to be aware of the benefits of technology as well as the potential dangers. Consequently, children must know how to use technology safely and wisely.

Our Computing Intent:

We aim to use high quality teaching, thought out planning and the effective use of resources to ensure children make progress through each year group. While doing so, children should acquire new knowledge and skills so that they at least meet the age-related expectations in the subject. Children should appreciate technology, its amazing opportunities but also the potential dangers. Coding aspects of the curriculum encourage our children to solve problems and enhance maths and literacy skills. Children should leave Kington Primary School with the knowledge and skills needed to enable them to adapt to new software and technologies that they will encounter as they move onto high school and their adult lives.

The National Curriculum for computing aims to ensure that all pupils:

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. 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.

Outcomes

In Computing education at Kington Primary School we aim to expose children to coding and programming, so that children can problem solve and design programs and applications to achieve goals. Using different software and hardware, children can control different elements and debug programs, make sequences, use variables and repetition in their coding alongside forms of input and output.

We aim for children at Kington Primary School to understand the massive potential of technology, while safely exploring the power of the internet and for children to be equipped with strategies and knowledge on how to use these technologies safely and respectfully; being outstanding digital citizens.

Children will leave Kington Primary School with the skills and knowledge that they can apply to existing and future software and hardware that they will encounter at high school and their later lives.

Implementation of the Computing Curriculum

We carry out curriculum planning in computing in three phases (long-term, medium-term and short-term). Our computing curriculum is delivered using the Early Years Learning 2023 goals and the 2014 National Curriculum Programmes of Study for Computing as a tool to ensure appropriate pace, progression and coverage of the subject. This coverage is reviewed continually by class teachers and planning is adjusted accordingly to ensure appropriate coverage of all computing strands.

Once they understand a computing concept, they are then required to use these skills in broader contexts in order for children to use and apply them in more meaningful circumstances.

Foundation Stage

The programme of study for the Foundation stage is set out in the EYFS Framework 2023.

Key Stage 1 and 2

The Programmes of study for computing are set out year by year for Key Stages 1 and 2 in the National Curriculum (2014). The programmes of study are organised into 4 main themes:

- Programming / Coding – creating software that follows instructions from inputs. These build in complexity as the children get older.
- Using and Applying – this area focuses on children learning skills, e.g. word processing, spreadsheets, presentation software, desk top publishing etc., so that children can actively select to use certain software for particular jobs – for example typing a neat version of a story, making an information poster about a topic etc.
- Understanding networks and information systems – it is important to have some understanding on how the technologies children use in their daily lives operate and function.
- Online Safety – With all the amazing benefits of the online world, children need to be aware that there are specific dangers. We teach children about these and how to protect themselves.

Key Stage 1

The principal focus of computing teaching in Key Stage 1 is to ensure that pupils recognise the uses of technology around them and its importance to our modern lives. Children should also begin to use technology safely to create their own work. In addition, children begin to develop their coding language, by creating algorithms that produce a desired outcome.

By the end of Year 2, pupils should know how to design simple algorithms and execute them, while beginning to explain their purpose and debug coding as required. Children should be familiar with names of key software and network locations that we use in Kington Primary School – e.g. Discovery Coding, Chrome, Safari, Word, Paint etc.

Key Stage 2

The principal focus of computing teaching in Key Stage 2 is to ensure that pupils become increasingly competent and knowledgeable about the foundations set in Key Stage 1. Children should be coding more complex programs for a range of purposes, using ICT in more of their other subjects as a way of recording and presenting work and have a deeper knowledge on networks and systems in school. At the same time, children should be more aware of the dangers of the online world and have a more sharpened set of skills on how to keep themselves and friends safe.

By the end of Year 4, pupils should be able to code in a variety of ways using Discovery Coding. This includes designing algorithms and their own apps, writing the code and evaluating their successes. Children will be able to use more software for specific purposes, e.g. word processing, animation, e-books etc. Children will be able to explain some key points in how to keep their personal information safe and what to do if they feel unhappy while online.

By the end of Year 6, pupils should be fluent in navigating our school networks, searching the internet safely and have a rich vocabulary in discussing their work. Children should see ICT as an integral part of their work and have access to presenting and recording their work on a regular basis. Children in Year 5 and 6 will have a greater understanding and depth of knowledge in term of coding, by using more complex software (Scratch). Children will have a range of strategies on how to keep themselves safe online and will know how to behave sensibly and respectfully online in the digital world. By the end of Year 6, children will be digital literate, ready for their next steps at high school.

Cross curricular

Throughout the whole curriculum, opportunities to extend and promote Computing should be sought. Examples where this is possible are wide, but include the following:

- English – watching videos, recording drama, writing neat work, finding images, online dictionaries, photographs, internet research.
- Maths – Times Table Rockstars, Learning by Questions, coding uses decimals, angles, probability – spreadsheets for formulae, graphs, tables, averages etc.
- Science – recording findings using photos, videos, spreadsheets, graphs. Research,
- Geography – Google Earth – locational knowledge, mapping, research, weather data etc.
- History – mapping, research, images,
- Art – making digital images, layering, printing, research,
- French – videos, songs, research
- DT – designing applications and evaluating their success
- RE – research, videos
- PE – recording data, videos, photos of sequences and routines.
- PSHE – online safety

Teaching and Learning

The approach to the teaching of computing within the school is based on:-

- A computing lesson every week
- A clear focus on direct, instructional teaching and interactive oral work with both the whole class and smaller ability groups.

The curriculum is delivered by class teachers. Tasks are designed for children to access at their appropriate level and to succeed to the best of their ability. There is one form entry with each class teacher taking responsibility for their year. Planning is based upon the National Curriculum (2014). Programmes of Study should inform medium term plans and subsequently weekly planning. Class teachers are responsible for the relevant provision of their own classes and develop termly plans which give details of learning objectives and appropriate differentiated outcomes. Although planned in advance, they are adjusted as required to better suit the arising needs of a class and individual pupils. We follow the Skills Ladder, developed by the Computing Coordinator, to ensure skills are built upon over each Key Stage. The Computing Lead links planning at Kington Primary School to the Teach Computing scheme of work, developed by the National Centre for Computing Excellence.

Inclusion and equal opportunities

All children are provided with equal access to the computing curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background. All children will have their specific needs met through differentiated work in conjunction with targets. TA support time is planned for and provided in relation to identified needs for individuals and groups.

Resources

All classrooms have reliable teaching computers and interactive touch-screen teaching screens. Kington Primary School has an impressive selection of iPads, Windows laptops or Chromebooks. These class sets can be booked onto the weekly/termly timetable. We also use a range of apps and web-based resources to help with consolidation and support in school and at home. These include Times Table Rock Stars, Discovery Coding, Scratch and Google's Be Internet Legends and Google Classroom.

Assessment

Children in the Foundation Stage are assessed in accordance with the EYFS curriculum.

Throughout the school, this subject is assessed via the Skills Ladder. Class teachers use these Skills Ladders to assess whether children in each cohort are working 'Below', 'At' or 'Above' the expected level for their year group.

Marking and presentation

Teachers are expected to adhere to the schools marking policy when marking books and presentation policy when guiding children as to how to present their work. Children in KS2 are encouraged to evidence their digital learning on their Google Classroom space.

Impact - Monitoring and Evaluating the Computing Curriculum

The subject coordinator, alongside the senior management team, are responsible for monitoring and evaluating curriculum progress. This is done through book scrutiny, planning scrutiny, lesson observations, pupil interviews, staff discussions and audit of resources.

Review

The computing policy will be reflected in our practice. The policy will be reviewed annually.