

Learning is fun at

Park Hill Infants' School



Computing Policy

To be read in conjunction with
Park Hill Infants Online Safety Policy

October 2023

Version 2

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1 Aims and objectives

1.1 Computing has become part of the way in which we all work and entertain ourselves. Almost everything we do at school now involves the use of computers and ICT equipment:

- online lesson research, teaching plans and resource materials
- lesson delivery via either a presentation or an interactive whiteboard
- accessing E-Books
- remote learning
- communication by e-mail
- document distribution and storage
- assessment information analysis
- iPad applications
- Educational websites
- production and editing of reports.

Thus, through teaching computing, we equip children to participate in a world of rapidly evolving and changing technology. We enable them to find, explore, analyse, exchange, manipulate and present information. We also help them to develop the necessary skills for using information in an effective way. This is a major part of enabling children to be confident, creative and independent learners.

1.2 Our objectives in the teaching of computing are to:

- facilitate the creation, organisation, storage, manipulation and retrieval of information;
- teach the use of computing for effective and appropriate communication;
- teach the application of computing to children's learning across the curriculum;
- explore the value of computing, both to children and to society in general;
- examine issues of security, personal safety, confidentiality and accuracy (Online Safety);
- develop the cross-curricular use of computing technology in all subjects.
- broaden children's critical thinking regarding the use of the internet and the value of different sources
- use logical reasoning to create, navigate and debug simple programs
- explore and understand the use of algorithms and input of unambiguous instructions on a digital device

Online Safety (Please also see separate policy: Park Hill Infants Online Safety Policy)

2.1 Online safety is an essential part of safeguarding and requires a whole school, cross-curricular approach and collaboration between all staff. The first series of lessons of every school year is focussed on Online Safety and all children sign a class Online Safety agreement. Purple Mash, Mathletics and Collins Big Cat E-book platforms provide secure, password protected storage for resources and activities. Resources and guidance are available and are implemented throughout the computing curriculum.

2.2 Students are provided with simple and safe logins and passwords in which they can access 'Purple Mash', 'Mathletics' and 'Collins Big Cat E-book' platforms. These platforms can store work only the teacher, student and parents/carers can view.

2.3 There are numerous Purple Mash curriculum resources which help promote online safety. Many of which are used throughout the first term in each year group's computing lessons to promote the importance of the topic.

2.4 Online safety approaches are also promoted throughout the home environment, in line with Keeping Children Safe in Education, which mentions keeping children safe "including when they are online at home".

2.5 Parents/ carers are provided with online safety advice and updates during 'Welcome to' Year group workshops at the start of every academic year.

- 2.6 At school all children have regular Online Safety sessions in class and also have whole school assemblies about how to keep themselves safe on the internet.
- 2.7 Staff are provided with regular, updated online safety training.

3 Teaching and learning

- 3.1 An objective of teaching computing is to equip children with the technological skill to become independent learners. Consequently, the teaching style that we adopt is as active and practical as possible. While, at times, we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in computing is for individuals or groups of children to use technology safely and efficiently.
- 3.2 We recognise that in all classes there are children with a wide range of computing abilities. This is especially true when some children have access to ICT equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways:
- setting tasks which are open-ended and can have a variety of responses;
 - setting tasks of increasing difficulty (not all children complete all tasks);
 - sometimes grouping children by ability, and setting different tasks for each ability group;
 - providing resources of different complexity that are matched to the ability of the child;
 - using learning support assistants to support the work of individual children or groups of children
 - arranging extension and enrichment activities for those requiring additional challenge

4 Computing curriculum planning

- 4.1 Computing is a foundation subject in the National Curriculum. The school follows the objectives of the National Curriculum and uses 'Purple Mash' as an online platform for pupils to practise these skills.
- 4.2 Computing is an integral part of the EYFS curriculum, in particularly 'Technology'. All children have the opportunity to use desktop computers, I-Pads and floor robots (Bee-bots). The children in EYFS are taught Computing during regular carpet sessions using the Purple Mash online platform.
- 4.2 We carry out the curriculum planning in computing in three phases (long-term, medium-term and short-term). The long-term plan maps the computing topics that the children study in each term during each year. The Curriculum Leader and Computing Subject Leader devise this in conjunction with teaching colleagues in each year group, and the children often access additional computing activities as part of their work in other subject areas (for example when reading E-books using I-pads). Our long-term computing plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression across each half term and each year group.
- 4.3 Our medium-term plans give further details of lessons for each term. They identify the key learning objectives for each unit of work, and stipulate the curriculum time that we devote to it. The computing subject leader is responsible for keeping and reviewing these plans.
- 4.4 The class teacher is responsible for writing the short-term, weekly plans with the computing component of each lesson. These daily plans list the specific learning objectives and expected outcomes for each lesson. The class teacher keeps these individual plans as part of their weekly foundation plan and discusses them on an informal basis with the computing subject leader.
- 4.5 The topics studied in computing are planned to build on prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also plan progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.
- 4.6 Parents and carers are required to give signed authorisation before their child can use the Internet, either in guided or in independent school work. Parents and carers are however, assured that their child's use of the Internet at school is always supervised. A record of those children who do not have permission to use the Internet at school is held by each class teacher and by the school office.

5 The contribution of computing to teaching in other curriculum areas

5.1 The teaching of computing contributes to teaching and learning in all curriculum areas. It also offers ways of impacting on learning which are not possible with conventional methods. Teachers use software to present information visually, dynamically and interactively, so that children understand concepts broadly. Computing enables children to present their information and conclusions in the most appropriate way.

5.2 English

Children have regular opportunities to use online Phonics programmes, apps and games. 'Collins Big Cat E-books' allow students to supplement their learning of reading at home and gives them personalised challenges. Children also use technology such as story headphones to listen to stories, poems and nursery rhymes. As the children develop mouse and keyboard skills, they learn how to type and revise text on a computer. They also have the opportunity to develop their writing skills by communicating via functions on programmes including 'Purple Mash' and 'Busy Things'. In KS1 the children learn how to improve the presentation of written work by using 'Microsoft Power-point' and 'Microsoft Word'. When using speaking and listening skills and presenting research or role play the children utilise filming technology using I pad camera functions to watch their own performances and make improvements. Just Press Play is a digital package which is used in classrooms to narrate stories, and 'voice over' research pages, supporting pupils to access a broad range of curriculum resources.

5.3 Mathematics

Children use computing in mathematics to collect data, make predictions, develop algorithms, program digital devices, analyse data results, and present information graphically. Screen robots allow pupils to give exact instructions for a particular route. When creating algorithms on screen or using 'Bee-bots' the children use directional language. Mathletics also allows students to further reinforce key maths curriculum objectives, such as mental maths skills, this can be accessed in school and at home

5.4 Science

Software is used to animate and model scientific concepts, and to allow children to investigate and research processes which it would be impracticable to do directly in the classroom. Data loggers are used to assist in the collection of data and in producing tables and graphs. The children can also record their observations through I pad camera functions and document processes as they investigate.

5.5 Personal, social and health education (PSHE) and citizenship

Computing makes a contribution to the teaching of PSHE and citizenship in that children in computing classes learn to work together in a collaborative manner. They also develop a sense of global citizenship by using the Internet.

5.6 Physical Education

Children use iPads and tablets to record, then analyse movements. These are used to highlight strengths and areas for improvement. Technology such as timers are also used in order for the children to time and improve their performance.

5.7 Art and Design, and Design Technology

Children are exposed to different genres of art and artists which include photographers. In KS1 they learn to use photography to manipulate images and change the colour and tone etc. The children learn about different moving mechanisms in Design Technology which links to the development of computerised systems and the ways in which modern technology is utilised. The children develop their evaluation skills when designing, writing and debugging programs that accomplish specific goals, including controlling or simulating physical systems.

6 Computing and inclusion

6.1 At our school, we teach computing to all children, whatever their ability and individual needs. Computing forms part of the school curriculum to provide a broad and balanced education to all children. Through our computing teaching, we provide learning opportunities that enable all pupils to make good progress. We strive hard to

meet the needs of those pupils with special educational needs, those with disabilities, those with special talents, and those learning English as an additional language, and we take all reasonable steps to achieve this.

- 6.2 When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively (e.g. a lot of software can be differently configured for different ability ranges, or utilised to support other areas of the curriculum). Assessing progress against the National Curriculum objectives for each year group allows us to evaluate each child’s progress against expected levels. This ensures that our teaching is matched and adapted to the child’s needs.
- 7.3 Work in computing may contribute to a child’s targets as set out in their Education Healthcare Plan (EHCP). Teachers will use these targets when planning and designing lessons in computing. In some instances, the use of computing has a considerable impact on the quality of work that children produce, by increasing their confidence and motivation.
- 7.4 We enable pupils to have access to the full range of activities involved in learning computing. We have a range of software which is designed to include all learners. Our hardware can accept a range of input devices catering to pupils with specific difficulties. Where children are to participate in activities outside the classroom, for example a visit to a computing exhibition, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

8 Assessment

- 8.1 Teachers will assess children’s work in computing by making informal judgements during lessons. On completion of a piece of work, the teacher assesses the work, and uses this assessment to plan for future learning. Written or verbal feedback is given to the child to help guide his or her progress. Children at all levels are encouraged to make judgements about how they can improve their own work. On top of this, teachers make formal termly assessments in foundations subjects, against the year group expectations set out in the National Curriculum and the Computing Leader. Children are assessed as ‘Working Below’, ‘Working Towards’, ‘Working at’ or working at a ‘Greater Depth’ in relation to the Expected Standard.

9 Resources

- 9.1 Our school has a computer room with 15 desktop computers in addition to 3 desktop computers in each classroom. 36 iPads are currently shared across KS1, and 6 in EYFS. There is also an appropriate computer-to-pupil ratio of story-phones, Bee-bots, interactive whiteboards and internet access. The vast majority of software is installed on the school network to be accessed from all areas of the school.
- 9.2 We employ a technician to keep our equipment in good working order. The technician will also set up new equipment, apps, programmes and will install software and peripherals.
- 9.3 In order to keep our school computers virus-free, no software from home will be installed on school computers. Pupils and staff cannot bring in work on portable storage disks due to online safety issues, but can submit work via e-mail to the teacher/school instead. Teachers do not need to transfer files or information between their home and school computers because they all have remote access via ‘Connect2school’.

10 Remote Learning

- 10.1 In the event of future lockdowns or self-isolation (not illness), students will be offered remote learning. This may include the use of Microsoft Teams or Google Classroom. Online safety policies will be adhered to whilst using these online platforms, e.g. live lessons will not be provided and will not include live webcam chats. (For further details, see separate policy on ‘Remote Learning’).

11 Monitoring and review

- 11.1 The coordination and planning of the computing curriculum are the responsibility of the subject leader, who also:
- supports colleagues in their teaching, by keeping informed about current developments in computing and by providing a strategic lead and direction for this subject;

- gives the Head Teacher an annual summary report in which the strengths and weaknesses in computing are evaluated and areas for further improvement indicated;
- uses specially allocated regular management time to observe teaching, monitor progress and review evidence of pupil's work.

11.2 The quality of teaching and learning in computing is monitored and evaluated by the Headteacher as part of the school's agreed cycle of monitoring and evaluation.

11.3 This policy will be reviewed every three years or sooner if necessary.

Signed: _____

Print Name: _____

Date: _____