**Pinders Primary School**

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**Computing and ICT Policy**

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**“Computers are incredibly fast, accurate, and stupid. Human beings are incredibly slow, inaccurate, and brilliant. Together they are powerful beyond imagination.”**

*—Albert Einstein (1879 - 1955)*

**Intent Statement**

At Pinders Primary School we believe technology is an integral and inescapable facet of modern life. We aim to equip our children with the skills they need to live safely in the increasingly digital world understanding that technology underpins every aspect of modern life – be that communicating with others, accessing government services or contributing to the workplace. We want our children to actively create, manipulate and develop their ideas – harnessing technology to work for them rather than passively consuming digital content. We will work with our pupils to build their understanding of both the benefits and drawbacks of technology allowing them to critically consider the content they encounter online, the choices they make and how to use technology appropriately. We understand that technology is not something that should be shied away from and actively model using technology safely.

We believe that technology is a key driver for engagement and leads to increased outcomes for our children. We invest in high quality technology to support our children in all of their learning across the curriculum to give prominence to its importance and safe use. We use our status as a SMART Exemplary School and an LBQ school to promote the benefits of technology within school and to the wider area.

**How is Computing Taught?**

Our broad and balanced computing curriculum is built around a clear sequence of progression in skills and knowledge. Children will embark on a seamless journey from EYFS to Year 6 which will develop them as independent and critical computer scientists. We have designed our curriculum sequence around a two year rolling cycle. We focus on computer science and algorithms in all years during the autumn term and revisit this with a specific focus on debugging within the summer term. During the spring term we look at data handling, multimedia and networks. Our computing curriculum is taught in discreet blocks throughout the year with clear cross curricular links as appropriate.

Understanding our school context, and the issues we see, we deliver our ESafety curriculum separately to highlight its prominence and to proactively tackle ESafety concerns. Our planned ESafety curriculum is delivered five times each year, we also teach additional lessons as required to respond to any emerging concerns.

**Introduction**

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Pinders Primary School we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose of this policy is to state how the school intends to make this provision.

**Aims in teaching Computing at Pinders Primary School:**

We aim to:

* Prepare children to live in an increasingly digital world.
* Teach children to actively harness technology rather than passively using it.
* Encourage children to critically consider their own use of technology.

The national curriculum for computing aims to ensure that all pupils:

* Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
* 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.

**Rationale**

The school believes that ICT and computing:

* Gives pupils immediate access to a rich source of materials.
* Can present information in new ways which help pupils understand access and use it more readily.
* Can motivate and enthuse pupils.
* Can help pupils focus and concentrate.
* Offers potential for effective group working.
* Has the flexibility to meet the individual needs and abilities of each pupil.

**Objectives**

Early years: It is important in the Early Years Foundation stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Early years learning environments should feature ICT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to ‘paint’ on the whiteboard or drive a remote-controlled toy. Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. This is particular useful with children who have English as an additional language.

By the end of key stage 1 pupils should be taught to:

* understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions.
* write and test simple programs.
* use logical reasoning to predict and computing the behaviour of simple programs.
* organise, store, manipulate and retrieve data in a range of digital formats.
* Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of key stage 2 pupils should be taught to:

* design and write 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; generate appropriate inputs and predicted outputs to test programs.
* use logical reasoning to explain how a simple algorithm works 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.
* describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.
* 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.

**Resources and access**

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible pc system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of ICT and computing across the school. Teachers are required to inform the Computing coordinator of any faults as soon as they are noticed. Resources if not classroom based are located in the ICT cupboard. A service level agreement with Mint Support is currently in place to help support the coordinator to fulfil this role both in hardware & audio visual. ICT and computing network infrastructure and equipment has been sited so that:

* Every classroom from nursery to y6 has at least one computer or laptop connected to the school network, a visualizer and an interactive whiteboard with sound, DVD and video facilities.
* Each class teacher has a class iPad
* There is a bank of 8 computers in the library.
* A second bank of computers exists in the meeting room.
* There are 2 laptop trolleys in school containing 15 laptops with internet access available to use in classrooms.
* There are 4 trolley of 15 iPads.
* There are 4 trollies of 32 android tablets.
* Internet access is available in all classrooms and teaching spaces.
* The iPads and laptops are available for use throughout the school day as part of ICT and computing lessons and for cross curricular use.
* A tablet trolley is based in each KS2 class but is available for any class to book.
* Pupils may use ICT and computing independently, in pairs, alongside a LSA or in a group with a teacher.
* The school has an ICT and computing technician who is in school one day or two afternoons every week.
* A governor with a particular interest in ICT and computing is identified to monitor the subject. school.

 **Planning**

As the school develops its resources and expertise to deliver the ICT and computing curriculum, modules will be planned in line with the national curriculum and will allow for clear progression. Modules will be designed to enable pupils to achieve stated objectives. Pupil progress towards these objectives will be recorded by teachers as part of their class recording system. Staff will follow medium term plans with objectives set out in the national curriculum.

**Assessment and record keeping (also see assessment policy)**

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the national curriculum to assess key ICT and computing skills each term. Assessing ICT and computing work is an integral part of teaching and learning and central to good practice.

**Monitoring and evaluation**

The subject leader is responsible for monitoring the standard of the children’s work and the quality of teaching in line with the schools monitoring cycle. This may be through lesson observations, book trawl of looking at other data for the subject. The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school. We allocate special time for the vital task of reviewing samples of children’s work and for visiting classes to observe teaching in the subject.

Pupils with special educational needs (see also SEN policy) We believe that all children have the right to access ICT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the ICT and computing curriculum for some pupils. We teach ICT and computing to all children, whatever their ability. ICT and computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of ICT and computing we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child’s different needs. Where appropriate ICT and computing can be used to support SEN children on a one to one basis where children receive additional support.

**The role of the co-ordinator**

There is a computing coordinator who is responsible for producing an ICT and computing action plan and for the implementation of the ICT and computing policy across the school.

To offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment.

To maintain resources and advise staff on the use of materials, equipment and books.

To monitor classroom teaching or planning following the schools rolling programme of monitoring.

To lead staff training on new initiatives.

To attend appropriate in-service training and keep staff up to date with relevant information and developments.

**Class Teacher**

The role of the class teacher Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning ICT and computing skills and using ICT and computing across the curriculum.

To plan and deliver the requirements of the EYFS outcomes and early learning goals or age related expectations for computing and ICT to the best of their ability. In Pinders Primary School we set high expectations for out pupils and provide opportunities for all pupils to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds. The class teacher ensures success by creating effective learning environments.

Securing their motivation and concentration

Providing equality of opportunity through teaching approaches.

**Staff training**

• The Computing coordinator will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests throughout the year.

• Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the coordinator.

• Teachers will be encouraged to use ICT and computing to produce plans, reports, communications and teaching resources.

**Security**

• The ICT and computing technician /coordinator will be responsible for regularly updating anti-virus software.

 • Use of ICT and computing will be in line with the school’s ‘acceptable use policy’. All staff, volunteers and children must sign a copy of the schools AUP.

• Parents will be made aware of the ‘acceptable use policy’ at school entry and throughout school.

• All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.

• The agreed rules for safe and responsible use of ICT and computing and the internet will be displayed in all ICT and computing areas.

**Cross curricular links**

 As a staff we are all aware that ICT and computing capability should be achieved through core and foundation subjects. Where appropriate, ICT and computing should be incorporated into schemes of work for all subjects. ICT and computing should be used to support learning in other subjects as well as develop ICT and computing skills.