

Potley Hill Primary School Computing and ICT Policy

At Potley Hill Primary School, we recognise the major part that computing plays in all of our lives, and understand that this contribution will continue to grow; computing will therefore be used extensively across the curriculum. Our aim is that computing is used to enhance pupils' learning and help develop their computational skills. In doing this, computing will also enhance pupils' ability to make decisions and solve practical problems in developing their ideas, as well as help them communicate with the world. 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.

For the purposes of this policy, Computing is spoken about in three strands defined as:

Computer science –using computational thinking to solve problems and make things for a purpose. It generally, but not always, involves writing programs.

Information technology – understanding how the computer works, also how to maintain work on computers (file and folder structure, naming files appropriately, saving different drafts) and troubleshooting problems with the computer. In addition to this, children should also know how to use technology to work in the other computing strands.

Digital literacy - understanding the safe and responsible use of technology, solving problems and making useful things with the use of digital tools (such as spreadsheets, video editing applications and so on.)

National Curriculum Aims and Objectives

The national curriculum for computing 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.

Planning

The school follows the Rising Stars scheme for computing, which ensures that all year groups – Reception to Year 6 - have fully planned and resourced lessons. The aforementioned lessons follow on through the ages, allowing children to develop all of the skills they need throughout the curriculum. Computing also links to all other subjects thus increasing its use across the whole curriculum, leading to added progression of skills. As E-safety is such a huge part of computing, each topic has E-safety lessons specifically designed to address any forthcoming issues.

National Curriculum objectives are:

Early Years

It is important in the Foundation Stage to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning

environments should feature Computing scenarios based on experience in the real world; such as role play. Children gain confidence, control and language skills through opportunities to explore using non-computer-based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

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 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
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key stage 2

Pupils should be taught 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 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.

Assessment

We assess children's work in computing by making informal judgements as we observe learning activities. Tracking grids are maintained by teachers to show coverage of different aspects of the computing curriculum. At the end of each term, teachers assess whether individual children are working towards end of year expectations, are meeting expectations or whether they are exceeding them.

Annual written reports are used to share progress and attainment information in computing with parents.

Resources

The Rising Stars scheme gives instructional videos for each topic to ensure that teachers are clear on outcomes and expectations. As a school we use the Rising Stars planning format and annotate it to allow for changes based on specific classes and children. We have a computer available in every classroom and a computer suite of 20 computers, 3 Laptop trolleys and one iPad trolley. These are timetabled for use by all

children. Computers around the school are networked and have Internet access. We keep resources for ICT and computing, including software, in a central store. Interactive Whiteboards are available for all children to access daily. The computing suite is available for use throughout the school day as part of computing lessons as well as for cross-curricular use. Software and hardware are regularly monitored by the Computing Lead to ensure it is fit for purpose.

Monitoring and reviewing

Monitoring of the quality of computing teaching and the standards of children's work is reviewed by the Computing Lead. Feedback is given to teachers within staff meetings and through reviews. Staff are given clear guidelines on areas for development. Leaders complete an annual Subject Story and use this to review their annual action plans.

Reviewed: October 2022

Next Review: October 2025