Preston Grange Primary School

Policy for Computing, ICT and Digital Literacy
Written: December 2019
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1. Introduction

"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."
(2014 Computing National Curriculum)

We at Preston Grange understand the growing importance of computing in today's society and this belief is reflected in giving our pupils the highest provision possible. This policy sets out a framework within which teaching and non-teaching staff can operate, and gives guidance on planning, teaching and assessment.

This policy should be read in conjunction with our e-safety policy.

2. What is Computing, Information and Communication Technology and Digital Literacy?

Computing
Computing is the study of how computers and computer systems work and how they are constructed and programmed.
Computing is the equivalent of teaching automotive engineering: how the clutch works, how to design new cars, and how to maintain existing ones.

Information and Communication Technology
ICT is a skills-based understanding focussing, typically, on the use of applications such as word processing, spreadsheets, video editing, databases, animation software etc . ICT skills are fundamental, but fundamental to ALL areas of the curriculum as are literacy and numeracy.
ICT is the equivalent to driving a car. We use tools that have been created for us to get to a desired outcome or destination.

Digital Literacy
Digital Literacy is the ability to find, evaluate and use and communicate through the use of computers. Increasingly, material is created and shared online. It can be accessed by anyone throughout the world at anytime. The focus on Digital

Literacy in the curriculum is not only making sure that our pupils can effectively find and use information and material online and using technology but that they can do so safely. We cover a wide range of topics such as spam, fake news and cyberbullying.

3. Rationale – Why should our pupils study Computing, ICT and Digital Literacy?

Children need to develop a variety of computing skills which allow them to harness the power of technology and use it both purposefully and appropriately.

- Computing is a vital skill for many jobs.
- Computing links closely to other subjects.
- Computing motivates the pupil because it is fun.
- Computing takes the laborious routine out of some text and information tasks, thus releasing the pupil to be more creative.
- Pupils need to recognise the power of computing in the world around them.
- Computing can allow work to be made available to a wider audience and give more purpose to work.
- Computing allows us to use material and resources that would not normally be available and undertake activities which would be difficult to pursue in any other way.
- Computing can enhance the learning process across the curriculum.
- Computing supports collaborative learning, discussion and group work.

4. Aims

- To ensure pupils can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. (NC)
- To ensure pupils can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve problems (NC)
- To ensure pupils can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. (NC)
- To ensure pupils are responsible, competent, confident and creative users of information and communication technology. (NC)
- To give all children in Preston Grange access to all areas of computing/ICT.
- To offer all children the opportunity to have reached their level in computing as specified in the computing National Curriculum.
- To develop ICT as a cross-curricular tool and to embed its use in the teaching of other subjects.
- To ensure that all children have access to, and experience of, appropriate hardware and software.

- To enable the children to work together collaboratively and to share ideas.
- To recognise that computing/ICT affects the way in which people live and work.
- Understand the capabilities and limitations of ICT and the implications and consequences of its use.

5. Strategies for the teaching of computing/ICT

Computing is taught as a distinct subject in order to develop the skills set out in the computing national curriculum. ICT use should be seen as a tool to help facilitate learning throughout the curriculum, helping to support and enrich children's learning. Due to this ICT can be used across all subjects of the curriculum and skills taught in context of other subjects.

5.1 Curriculum

Computing will be considered as part of the schools Curriculum review cycle. It will be taught as a discrete subject and cover the relevant NC programmes of study. ICT is used across the curriculum where appropriate.

5.2 Classroom management

Within the scheme of work, learning activities for computing and ICT are sequenced to ensure progression, and are taught in a variety of ways:

- Direct whole class teaching to introduce a specific program or skill.
- Through practical tasks using appropriate hardware and software.
- Through group activities to encourage the children to work together collaboratively and to share ideas.
- By encouraging children to demonstrate new skills to others.
- By providing the children with real life experiences in the practical application of ICT.

The children use the Russell Suite for many of their lessons. This is a suite of 32 PCs for the use of teaching Computing, ICT and Digital Literacy.

iPads are available for use within Computing, ICT and Digital Literacy. These are used either as discrete computing skills or to facilitate learning and creativity in other subjects. The school has 30 iPads for use with the children.

5.3 Time allocation

Due to the school having a computer suite the children are able to spend a good amount of time on computers. The Russell Suite is booked out by staff as and when it is needed and each class also has an allocated time in which to teach in the Russell Suite. iPads and classroom computers are planned for and used whenever appropriate.

6. Assessment of ICT

ICT can be assessed in a variety of ways:

- Observation of a child or group at work.
- Discussion with children about their work.
- Work saved on the computer's hard drive or shared drive.
- Printouts of pupils work.
- Children's own evaluations of their work.
- Use of Google Drive to save and assess children's work.

These assessments:

- Inform future planning.
- Provide information about individuals and groups.
- Provide information for parents.

7. School management of hardware and software

7.1 Purchasing

Hardware and software will be purchased when a need is identified and to ensure the school keeps up with modern technology and programs. The purchase of this hardware and software will be done in consultation with the head teacher, governors, teachers, LEA advisory staff and the publishers of the material. Software for specific subjects can be purchased by the co-ordinator of that subject.

7.2 Organisation of hardware

The school computer network comprises of 32 workstations in the Russell Suite. These workstations are connected to ranger primary network allowing each machine to access the internet, printers and work areas. The ICT co-ordinator is responsible for the upkeep of this network system. Each teacher is also allocated an iPad.

The school's 60 iPads are found in the classroom's and each class has been allocated a slot during the week in which to use them. Any additional use must be booked via the co-ordinator.

As well as this network the school has projectors and interactive whiteboards in each teaching classroom, scanners, digital cameras, controllable robots etc .

8. Access to ICT

8.1 Pupils with Special Educational Needs

All children should have access to a broad and balanced curriculum which includes ICT. Pupils with special needs have the same ICT entitlement as all other pupils. Provision for children with SEN in relation to ICT is the responsibility of the class teacher, support staff and the SEN co-ordinator. ICT can be used for.

Pupils with difficulties in learning who need to be motivated to practice basic skills regularly and intensively. These pupils would benefit from the use of programs in which skills practice is set in the context of a motivating game.

Certain pupils with physical or communication handicap may have their own specially adapted machines for use in communication and across the curriculum.

Pupils of a high attainment may extend their knowledge and understanding through the use of programs which offer a challenge and the opportunity for research or investigation.

9. Staff development

Staff attend necessary INSET courses to development their understanding of new software/hardware. The ICT Co-ordinator attends courses as required to keep up to date with new technologies and developments.

10. The role of the ICT co-ordinator

One member of staff is designated as the key Computing/ICT/Digital Literacy co-ordinator. The co-ordinator is responsible for the day to day implementation of the Computing/ICT/ Digital Literacy policy.

Co-ordination.

- Ensuring that the policy is implemented consistently throughout the school.
- Ensuring assessments are carried out.

Resources

- Organising resources to support the computing/ICT policy and scheme of work.
- Ensuring safety of equipment.
- Co-ordinating the purchasing and maintenance of equipment and software.

Staff development and support

- Assisting teachers to plan for computing/ICT.
- To help subject co-ordinators incorporate ICT into their subjects
- Arrange in-service training.
- Provide general advice.

Monitoring and review

- Review the computing/ICT policy and scheme of work on a regular basis and amend them where appropriate.
- To monitor and review computing/ICT practice and provision within the school.
- Involve all members of staff in the review of the policy and scheme of work.

External liaison

- To keep up-to-date with the use of computing/ICT in the curriculum and other developments in this rapidly changing field and to pass this information onto colleagues as appropriate.
- Liaise with LEA and NTLTrust advisory services and other agencies.

11. Strategies for recording and reporting

Reporting to parents is done on a through parents evenings and annually through a written report.

12. Troubleshooting

When a fault occurs on a system in either the software or hardware, staff will check the system. If the problem is not fixed within ten minutes then the machine should be turned off and the pupils directed to another activity. The Computing/ICT/ Digital Literacy co-ordinator will provide support to rectify the

problem as soon as possible. Support is also available through an onsite ICT technician who comes into school for one afternoon a week. Anything that cannot be solved quickly should be passed on to the technician via the computing coordinator.

13. Security

See e-safety policy for details

14. Internet

See e-safety policy for details

15. Monitoring and review

This policy is reviewed on an annual basis by the ICT Co-ordinator.

J Russell 2019
Latest Review: Dec. 2022