PHOENIX PRIMARY SCHOOL
COMPUTING 2024/25

Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Phoenix Primary School we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Aims

The school's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the Early Years Foundation Stage development matters curriculum
- Meet the requirements of the national curriculum programmes of study for computing at Key Stage 1 and 2
- To respond to new developments in technology
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and computing.
- To develop the understanding of how to use computers and digital tools safely and responsibly
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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 IT, computer science and digital literacy:

- are essential life skills necessary to fully participate in the modern digital world.

- allows children to become creators of digital content rather than simply consumers of it.
- provides access to a rich and varied source of information and content.
- communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- can motivate and enthuse pupils.
- offers opportunities for communication and collaboration through group working both inside and outside of school.
- has the flexibility to meet the individual needs and abilities of each pupil.

Objectives

Early years (see also early year's policy)

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play.

Computing is not just about computers. Early years learning environments should feature IT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for 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
- Create and debug 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
- Use technology purposefully to create, store, manipulate and retrieve digital content
- Communicate safely and respectfully online, keeping personal information private, identify where to go for help and support when they have concerns about content
- 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
- 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
- Use a range of digital devices to design and create a range of programs, systems and content

that accomplish given goals
- 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 consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. A service level agreement with CUC Solutions is currently in place to help support the subject leader to fulfill this role both in hardware & software. Computing network infrastructure and equipment has been sited so that:

- Every classroom from nursery to Y6 has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- Each class has access to their own I-pad
- 32 Macbook Pro's and 20 class I-pads
- There are 4 x iPad Sync & Charge cabinet in school containing 10 USB ports
- Internet access is available in all classrooms.
- Each class from Y1 – Y6 has an allocated slot one afternoon per week for teaching computing as a discrete subject.
- Laptops and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- A governor will be invited to take a particular interest in computing in the school.

Planning

The school will be using computing planning which fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing. Pupil progress towards these objectives and progress will be recorded by teachers as part of the school recording system. Staff will follow planning guidance.

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effected.

Assessment and record keeping (also see Assessment Policy)

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. Assessing computing is an integral part of teaching & learning and key to good practice.

Assessment should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved. Assessment can be broken down into;

- Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.
- Summative assessment should review pupils' ability and provide a best fit 'level' to be assessed at the end of the year

We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

We record the results in our assessment files and we use these to plan future work, provide the basis for progress and to communicate with the pupil's future class teacher(s). The children's work is saved on the school network. Other work may be printed and filed within the subject from which the task was set. There is also an evidence folder in each classroom to keep samples of the children's work in a portfolio.

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, pupil discussion and evaluating pupil work.

We allocate 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 IT 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 computing curriculum for some pupils.

We teach IT and computing to all children, whatever their ability. Computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of computing we provide opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs. Where appropriate IT can be used to support SEN children on a one to one basis where children receive additional support.

Equal opportunities (see also equal opportunities policy)

We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the equal opportunities policy. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately.

The role of the Subject Leader

There is a computing subject leader who is responsible for the implementation of computing policy across the school. Their role is to:

- offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- provide colleagues opportunities to observe good practice in the teaching of computing.
- maintain resources and advise staff on the use of digital tools, technologies and resources.
- monitor classroom teaching or planning following the schools monitoring programme.
- monitor the children's progression in computing, looking at examples of work of different abilities.
- manage the computing budget.
- keep up-to-date with new technological developments and communicate information and developments with colleagues
- lead staff training on new initiatives.
- attend appropriate in-service training
- have enthusiasm for computing and encourage staff to share this enthusiasm.
- keep parents and governors informed on the implementation of computing in the school.
- liaise with all members of staff on how to reach and improve on agreed targets
- help staff to use assessment to inform future planning.

The role of the class teacher

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning computing and using their knowledge, skills and understanding of computing across the curriculum.

They will plan and deliver the requirements of the National Curriculum for Computing to the best of their ability. We set high expectations for our pupils and provide opportunities for all 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's role is a vital role in the development of computing throughout the school and will ensure continued progression in learning and understanding, and create effective learning environments.

The class teacher will also:

- secure pupil motivation and engagement
- provide equality of opportunity using a range of teaching approaches and techniques
- use appropriate assessment techniques and approaches
- set suitable targets for learning as outlined in the inclusion policy.
- maintain up to date assessment records (see policy document).

Staff training

The computing subject leader 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 subject leader.

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

Health and safety (see also Health and Safety policy)

The school is aware of the health and safety issues involved in children's use of IT and computing.

All fixed electrical appliances in school are tested by a Local Authority contractor every five years and all portable electrical equipment in school is tested every twelve months.

It is advised that staff should not bring their own electrical equipment in to school but, if this is necessary, equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school by, for example, visitors running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people.

All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to a computer technician, bursar or head teacher who will arrange for repair or disposal.

In addition:

- children should not put plugs into sockets or switch the sockets on.
- trailing leads should be made safe behind the equipment
- liquids must not be taken near the computers
- magnets must be kept away from all equipment
- safety guidelines in relation to IWBs will be displayed in the classrooms
- e-safety guidelines will be set out in the e-safety policy & Acceptable Use Policy

Security

We take security very seriously. As such:

- use of IT 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 ks2.
- all pupils and parents will be aware of the school rules for responsible use of IT and computing and the internet and will understand the consequence of any misuse.
- the agreed rules for safe and responsible use of IT and computing and the internet will be displayed in all computing areas.

Cross curricular links

As a staff we are all aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all

subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding. Our school provides pupils with opportunities to enrich and deepen learning using cross-curricular approaches.

Parental involvement

Parents are encouraged to support the implementation of IT and computing where possible by encouraging use of IT and computing skills at home for pleasure, through home-learning tasks and use of the school website and app. Parents will be made aware of issues surrounding e-safety and encouraged to promote this at home.

Intent

At our school we want pupils to be MASTERS of technology and not slaves to it. Technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology (especially social media) to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education. Building our knowledge in this subject will allow pupils to effectively demonstrate their learning through creative use of technology We recognise that technology can allow pupils to share their learning in creative ways. We also understand the accessibility opportunities technology can provide for our pupils. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists. We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We want our pupils to be fluent with a range of tools to best express their understanding and hope by Upper Key Stage 2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers.

Implementation

We have created a comprehensive progression document for staff to follow to best embed and cover every element of the computing curriculum. The knowledge/skills statements build year on year to deepen and challenge our learners.

Information Technology	Computer Science	Digital Literacy
Word Processing/Typing	Computational Thinking	Self Image and Identity
Data Handling	Programming	Online Relationships
Presentations, Web design and eBook	Computer Networks	Online Reputation
Animation		Online Bullying
Video Creation		Managing Online Information
Photography and Digital Art		Health, Wellbeing and Lifestyle
Augmented Reality and Virtual Reality		Privacy and Security
Sound		Copyright and Ownership

As with most of the ideas on MrPICT.com, we feel the majority of computing should be embedded across the curriculum. We teach a discrete timetabled computing lesson every other week but allow for flexibility in using our resources to embed skills across other curriculum subjects. the timetabled computing session to focus on one of three elements: An Explicit Computer Science lesson, A Tinkering Session or a D.A.R.E.S project. The computer science part of the computing curriculum will often, but not always, need a more explicit approach. That is not to say it can't be embedded across the curriculum. A tinkering session looks at introducing a new app or tool and giving children opportunity to experiment and familiarise themselves with the different elements and tools before it can be applied in a more focused approach across the curriculum.

Impact

We encourage our children to enjoy and value the curriculum we deliver. We will constantly ask the WHY behind their learning and not just the HOW. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. Finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond. We encourage regular discussions between staff and pupils to best embed and

understand this. The way pupils showcase, share, celebrate and publish their work will best show the impact of our curriculum. We also look for evidence through reviewing pupil's knowledge and skills digitally through tools like Seesaw and observing learning regularly. Progress of our computing curriculum is demonstrated through outcomes and the record of coverage in the process of achieving these outcomes,

September 2024