Hampton Primary School

Working Together, Achieving Together

COMPUTING POLICY

This Policy was approved at a meeting of the Full Governing Body on 21st November 2022

Chair of Governors: Mr L Shilling
Headteacher: Ms Y Nunn

Signed ..... Chair of Governors

Signed ..... Headteacher

Review Date: September 202

Hampton Primary School

Computing Curriculum Intent Statement

September 2022

Hampton Primary School Computing Policy

The policy is written with consideration of Article 28 of the UNCRC 'Every child has the right to an education' as well as Article 29 'Education must develop every child's personality, talents and abilities to the full.'

Our Whole School Intent Statement

At the forefront of Hampton's curriculum is equity for every child with every curriculum experience underpinned by our core values: understanding that children are unique in their needs and circumstances. We value each child as an individual, each with a unique potential for learning. Our aim is to prepare every child for life beyond Hampton, providing them an exciting and empowering curriculum with the skills, knowledge and values that equip them for today and tomorrow.

When children leave us to move on, their curriculum experiences at Hampton will ensure they have:

A sureness in themselves as a young person and their attitudes to learning

A sound knowledge of basic skills

An understanding of the moral, spiritual, cultural, mental and physical virtues they all possess

Aspiration and resilience to aim high and challenge themselves to achieve great things in the future

A sense of belonging, moral purpose, respect and tolerance for others

A set of core values which are life skills, fostering responsibility for learning and future success allowing them to be happy and confident adults.

* The terms **Computing** and **ICT** are referred to throughout this policy. Where applicable ICT (Information Communication Technology) is used to describe opportunities to access resources within school e.g. Laptops, iPads, Digital Cameras etc. The term ICT does not represent the outline of the subject.

Computing refers to the subject as a whole of which all other strands stem fro

What is Computing?

A high-quality computing education equips pupils to understand and change the world through logical thinking and creativity, including by making links with mathematics, science and design and technology. The core of computing is computer science, in which pupils are taught the principles of information and computation, and how digital systems work. Computing equips pupils to use ICT to create programs, systems and a range of media. It also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through,ICT – at a level suitable for the future workplace and as active participants in a digital world.

Rationale

Hampton Primary School believes that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our pupils.

Our Computing teaching follows the National Curriculum and is tied together through the implementation of the Purple Mash scheme of work. Each year group's planning allows a consistent approach to Computing for children to develop their technical ability within the subject. The skills which the children develop in Computing lessons are vital for the children's learning as they grow through an ever-expanding digital age.

Computer science is a key aspect of our Computing teaching, 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 provided with a variety of information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate, allowing them to be able to use, and express themselves and develop their ideas through a wide a variety of different ICT equipment, and at a level suitable for the future workplace and as active participants in a digital world. Throughout the year the children have opportunities to link their learning to practical activities, learning and projects through STEM focused weeks throughout each year.

Sequential learning

As a school, we have chosen the Purple Mash Computing Scheme of Work from Reception to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility and strong cross-curricular links.

Our Computing curriculum is delivered in our school through sequential learning. Each lesson will build on the pupil's prior learning to develop better progress in the Computing curriculum. We begin introducing children to a wide variety of technology in the EYFS, to introduce children to computational thinking. This is built on in KS1 as children begin using this computational thinking and applying it to computer sciences, such as coding, programming and debugging ICT equipment, predicting the behaviour of simple programs, and purposefully using technology to create, organise, store, manipulate and retrieve digital content. This is then further cemented in KS2 as the pupils will learn to design, write and debug programs that accomplish specific goals, use sequence, selection, and repetition in programs, and use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

It is also crucial for us as educators to teach our pupils about how to be respectful online citizens. We begin teaching the children from the Early Years about how to be safe online and what to do when facing this behaviour. We progress this learning throughout KS1 and 2 to inform children of how to use different online technologies safely and respectfully.

Aims

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 ofwriting 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 ICT

Our curriculum also aims to:

- Provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.
- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- Provide technology solutions for forging better home and school links.
- Enthuse and equip children with the capability to use technology throughout their lives.
- Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Utilise computational thinking beyond the Computing curriculum.
- Give children access to a variety of high quality hardware, software and unplugged resources.
- Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.
- Instill critical thinking, reflective learning and a 'can do' attitude for all our pupils, particularly when engaging with technology and its associated resources.

Intent

At Hampton Primary, in Computing we believe children learn best by having opportunities to revisit previous learning. We teach computing every week so that the children can fully immerse themselves and have opportunities to reflect and build on prior learning. Computing is a key aspect of the curriculum to prepare children living in the digital age. We believe that learning in Computing should promote children's ability to code, program, use a variety of software and use these skills safely online. At our school, Computing is used to give children an opportunity to develop their technical abilities and work as a team or independently to do so.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters,skills and processes specified in the relevant programme of study.

Subject content 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 digitalcontent
- Use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet
- Recognise common uses of ICT beyond school.

Subject content Key Stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling orsimulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and variousforms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect andcorrect 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 communicationand 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 ofdigital 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.

Cross Curricular Links

Computing permeates all subjects, themes and dimensions in accordance with the orders for Computing.

Classroom Management of ICT

All classrooms are equipped with an Interactive Whiteboard, which is run alongside a laptop. Each class also has at least 1 teaching iPad that may be used to demonstrate activities via the interactive whiteboard or to observe and record children's work. This can then be displayed within the class for teaching purposes including personal response and evaluation.

Hampton has one laptop trolley (class set), an iPad trolley for every year group (16 per trolley) and a class set of iPads for PPA provision (32 iPads). Each class is timetabled to have access to the laptops and iPads to be used in specific Computing skills lessons or can be booked out to support teaching and learning in all other curriculum areas.

An audit of equipment is carried out by the ICT staff on a regular basis to monitor quality of resources and promote best access to Computing for children.

Computing skills and knowledge should be presented:

- Via demonstration by the teacher to stimulate and teach children specific Computingskills and packages.
- With lots of 'hands on' experience allowing regular opportunities for practice andconsolidation of Computing skills and techniques.
- Via both independent and collaborative activities to use ICT as a tool for investigation inall subject areas.

Timing

The recommendation is for one hour per week to be dedicated to discrete Computing lessons tointroduce new skills. All children have access to laptops, computers and iPads at other times throughout the week, in order that Computing skills are used and embedded in other curriculum areas.

Continuity and progression of Computing

The Computing curriculum should ensure continuity and progression throughout the FoundationStage, Key Stage 1 and Key Stage 2. Progression in Computing involves:

- The progressive development of pupils' skills, knowledge and understanding
- Breadth of applications.
- Increased complexity of contexts in which ICT is applied.
- The growing autonomy of the pupil in their learning.

In Reception, children discover computing through the overarching topic of technology and understanding the world. Opportunities to access ICT are available within class, whilst othercomputing skills can be accessed in both indoor and outdoor areas.

Throughout Key Stage 1 and 2, children are taught through discrete, weekly Computing lessonswith opportunities to use ICT arising within the entire curriculum.

Assessment & Recording of Computing

Teacher assessments of Computing capability will be recorded throughout the year and reported to parents at the end of each academic year. Staff should keep examples of pupils' work to form a judgement on each pupil's level of attainmentat the end of both Key Stages. Some class or group activities may be recorded using digital photography, digital recording and printouts. Assessments of children will refer to the Purple Mash progression document which identifies key skills required within each year group.

The Role of the Subject Lead

To take the lead in policy development and be responsible for schemes of work that ensures progression and continuity in Computing throughout the school.
To support colleagues.

- Monitoring of subject area – climate walk, book looks and observations.
- To suggest assessment and record keeping strategies.
- To oversee the resource needs of the subject and introduce teachers to new and appropriate materials & equipment as they become available.
- To maintain and update subject display board in a communal area.
- To maintain and update subject area on school website.
- To monitor progress in Computing and advise the Head teacher on any action to take or areas to develop.
- To disseminate information to colleagues regarding up to date Computing curricular developments in accordance with national & local guidelines.
- To report back to staff and advise on INSET and other professional development opportunities.

Special Educational Needs

Pupils with Special Educational Needs benefit from using ICT as it can enhance access to the curriculum, which in turn encourages motivation and development of cross-curricular skills and so raises achievement. Opportunities to utilise Computing for children with SEND are thus maximised.

Support staff use ICT in small groups and one to one sessions implementing speech and language and reading programs, using identified software.

Equal Opportunities

All pupils regardless of age, race, gender, religion or ability should have the opportunity to develop Computing capability. We ensure that all pupils:

- Have equal access to ICT resources.
- Have equal opportunities to develop Computing capability.
- Use software that is appropriate to their ability.

Respecting Rights

The policy is written with consideration to our school commitment to the Rights of the Child and our achievement of becoming a Rights Respecting School and it complies with Article 28 of the UNCRC 'Every child has the right to an education' as well as Article 29 'Education must developevery child's personality, talents and abilities to the full.' Although direct reference to this is not continuously made, the policy has been written with full awareness of our responsibility and commitment to children's rights