KINGS HILL SCHOOL
PRIMARY & NURSERY

Kings Hill School
Primary and Nursery

Computing Policy

Kings Hill School Primary & Nursery

COMPUTING POLICY

Introduction

At Kings Hill School Primary & Nursery, it is our aim to provide our pupils with the opportunity to gain fundamental life skills that will enable our pupils to embrace, enjoy and utilise a range of technology in our modern-day world. We intend to integrate technology in to all areas of the curriculum through targeted, well planned lessons in both core and foundation subjects.

Aims

- The computing subject leader and SLT to support the delivery of a high-quality computing education.
- To develop children's computational thinking and allow children to problem solve in a creative, logical and collaborative way.
- To create opportunities for collaborative and independent learning.
- To support pupils in becoming responsible, competent, confident and creative users of information and communication technology.
- To develop children's understanding of technology and how it is constantly evolving.
- To allow children to explore a range of digital devices.
- To promote pupils' spiritual, moral, social and cultural development through computing.
- To widen learning experiences through a range of devices and resources; making self and peer reflections when appropriate.
- To develop computing as a cross-curricular tool for learning and progression.
- To promote learning through the development of thinking skills.
- To enable children to understand and appreciate their place in the modern world.

Computing Intent

At Kings Hill School the curriculum intent in computing is that children:

- Acquire knowledge of the fundamental aspects of computer science and information technology.
- Are able to apply this knowledge to become digitally literate and use analytical problem-solving skills and computational thinking.
- Become responsible, competent, confident and creative users of information and communication technology.

Learner Profiles

We have developed six learner profiles that fundamentally underpin our curriculum aims and design. These profiles encompass our values based ethos, reflect the strengths of the school and are responsive to the needs of our community and the ever changing wider world around us:

- *I am a good communicator.*
- *I am knowledgeable.*
- *I am an innovator.*
- *I am an individual.*
- *I am a good citizen.*
- *I am emotionally intelligent.*

Values-Based Education

The school has six core values developed by staff, pupils, parents and Governors. These six values represent the basis of values-based education at Kings Hill School and all other values are linked to them throughout the year such as compassion, loyalty, happiness, humility and trust. Our school values draw attention to key behaviours needed for children to become excellent learners and citizens. These are specifically taught through our curriculum and assembly programme.

Computing Implementation

At Kings Hill School Primary and Nursery, our computing curriculum is taught using a spiral curriculum, providing the opportunity for children to revisit concepts throughout their time with us. This ensures pupils are able to develop depth in their knowledge and skills over the duration of each of their computing topics. Where relevant, some modules are

taught in specific terms to compliment other cross-curricular units of learning. Content is selected carefully to allow richer and deeper learning experiences. Lessons are learned for a specific purpose and real-life applications are emphasised to make learning relevant. Opportunities to build upon this learning is offered throughout the children's time at Kings Hill School.

Our children in Early Years will be exposed to handling data, programming, multimedia and technology in their lives as they explore the world around them and how technology is an everyday part of their learning and understanding of the world. We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe that pupils can gain confidence, control and language skills through an assortment of computing opportunities. Teachers facilitate ICT scenarios based on experience in the real world, such as in role play. We believe that it is fundamental for our pupils in early years to carry this learning on in the outdoor environment by using toys such as walkie talkies or remote-controlled toys. Both plugged and unplugged activities are embedded through continuous provision.

In Key Stage 1 the children will learn to understand what information technology is, identify a range of devices which are computers and consider how technology can help us both at school and at home. Online safety is embedded through each topic, allowing children to consider how they use different forms of information technology safely, in a range of different environments. Our pupils will be shown how to use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content as well as recognise common uses of information technology beyond school. Children will be taught what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They will be taught to create and debug simple programs and use logical reasoning to predict the behaviour of simple programs. Children will be taught to 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. Each of these skills will be taught through half termly units.

In Key Stage 2 the children will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. They will use sequence, selection, and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs. Children will be taught to understand computer networks, including the internet, and the opportunities they offer for communication and collaboration. They will use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content. Children will be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that accomplish given goals. They will use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Computing Impact

Our Computing curriculum is high quality and is planned to demonstrate progression. If children demonstrate understanding of the required knowledge and skills within the Kings Hill School and Nursery computing progression model for their year group they are meeting age related expectations; some children will show that they have exceeded age related expectations.

In addition, we measure the impact of our curriculum through the following methods:

- A reflection on standards achieved against the planned outcomes.
- Ensure the teaching of computer science, including coding and algorithms, is of high quality and progressively builds pupils' knowledge and skills.
- Children can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Children can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- Children can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Children are responsible, competent, confident and creative users of information and communication technology
- A celebration of learning for each term which demonstrates progression across the school.

Learning Environment

At Kings Hill Primary and Nursery school we provide computing opportunities in all learning environments. Each classroom is equipped with 3 desktop computers, an interactive whiteboard and a class visualizer to support children's learning. All children have access to iPads and more recently, apple TV's have been installed in each classroom to facilitate learning.

In 2020, we redesigned our state-of-the-art computing suite which provides a rich learning environment. Computing displays, within the suite, support children's learning which includes key information, vocabulary and key questions to encourage discussion.

Equal Opportunities and Inclusion of all learners

It is our policy to ensure that all children, should have the opportunity to develop a vast range of skills and knowledge in computing. Teachers provide learning opportunities that are matched to the needs of every child in our school, enabling them to reach their full potential. We strive to meet the individual leaning needs of all pupils with special educational needs, special gifts and talents and children, children from social and cultural backgrounds and children with English as an additional language. Computing can cater for a variety of learning styles and is able to:

• Support children to access to the curriculum
• Raise levels of motivation and self-esteem
• Address individual learning needs

At Kings Hill School we aim to maximise the use and benefits of technology as one of many resources to enable all pupils to achieve their full potential. If the situation arises, the school will endeavour to provide appropriate resources to suit the specific needs of individual or groups of children.

Health and Safety

Our school is committed to ensuring that all pupils use technology safely and responsibly. We will regularly educate pupils about online safety, cyberbullying, and the need to protect personal information. We will operate all ICT equipment in compliance with Health & Safety requirements and our pupils will be taught how to use a range of different technology safely. Children will be made aware of the correct way to sit when using the computer and the need to take regular breaks if they are to spend any length of time on computers. ICT Suite rules are also on display within the ICT room for reference along with specific rules for the use of Internet and E-mail. Our Network Facilities Manager and IT Technician will be responsible for regularly updating anti-virus software. They also ensure that files and our network system are backed up regularly. Staff will check equipment before use and any visual signs of damage will be reported to the Network Facilities Manager, IT Technician or Computing Lead. The virus checker is also updated frequently. This policy also aligns with our 'Online Safety Policy' document which supports the safety of children and families when using the internet.

Roles and Responsibilities

Technology is a fundamental part of our everyday life, which extends beyond the National Curriculum. There are various key roles and responsibilities across the school.

Head Teacher

- Monitor the implementation of the Computing Policy and its associated policies such as the Safeguarding and SEND policies.
- Ratifying (in conjunction with the Governing Body) the Computing policy, Safeguarding Policy and Computing Leaders Action Plan.
- Approving CPD and training which is in line with the whole school's strategic plan.
- Approving budget bids and setting them.
- Creating in conjunction with the Computing Leader, a long-term vision for computing which includes forecasted expenditure and resources.
- Monitoring the performance of the Computing Leader in respect to their specific job role for Computing.
- Ensuring any government legislation is being met.

Computing Leader

- Raising the profile of Computing.
- Monitoring the standards of computing and feeding back to staff in a timely fashion so they can act on areas for development.
- Ensuring assessment systems are in place for computing.
- Maintaining overall consistency in standards of computing across the school.
- Reporting on computing at specific times of the year to the Head Teacher/ Governing Body.
- Auditing the needs of staff including training and CPD.
- Actively supporting staff with their day to day teaching of computing.

- Seeking out opportunities to inspire staff in developing their practise through modelling and sharing new ideas, approaches and initiatives.
- Attending training and keeping abreast with the latest educational technology initiatives.
- Using nationally recognised standards to benchmark Computing.
- Creating Action Plans for Computing and supporting a long-term vision which feeds into the whole school development plan.
- Creating bids for the annual budgets and monitoring budget spend.
- Keeping an up-to-date log of all resources available to staff.
- Procuring physical and online resources that demonstrate best value.
- Reviewing the Computing curriculum and developing it as needed.
- Working as needed with the SENCO/Head Teacher to ensure online safety provision is above adequate and all legislation is in place.

Network Facilities Manager and IT Technician

- Conducts routine scheduled maintenance/updates on systems.
- Supports the administration and set-up of online services including the school website.
- Fixes errors/issues with hardware and software set-up, prioritising as needed.
- Routinely checks school filtering, monitoring and virus protection.
- Maintains network connectivity and stability.
- Sets up new hardware and installations.
- Supports the Computing Leader and Head Teacher with future infrastructure needs and associated projected costs.

Progression and Assessment

Progression in Computing will be monitored through ongoing formative assessment and summative assessment. Teachers will use a range of strategies to assess pupils' knowledge, understanding, and practical skills. Assessments will inform planning and provision, enabling teachers to identify areas where additional support or challenge is required.

Review

This policy is monitored through:

- Regular monitoring and evaluation of planning
- Lesson observations to monitor the quality of teaching and implementation of planning
- Pupil interviews and questionnaires