



Computing Policy

Safeguarding Statement

West Heath Primary will continuously strive to ensure that everyone in our school is treated with respect and dignity. Each person in our school will be given fair and equal opportunity to develop their full potential with positive regard to gender, ethnicity, cultural and religious background, sexuality or disability. West Heath Primary School is committed to safeguarding and promoting the welfare of children and young people, and expects all staff to share this commitment. Please also refer to the No Platform, Visiting Speaker Policy.

Computing Policy

Audience:

This policy is designed to be used by teachers at West Heath Primary School to ensure the expectations in relation to the teaching of Computing are clear and there is consistency across the school.

Aims:

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 West Heath 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.

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 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

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
- are responsible, competent, confident and creative users of information and communication technology.

This policy supports our whole school ethos of developing the whole child, including their head (knowledge), heart (values) and hands (skills). Additionally, this includes the *Spiritual Moral Social and Cultural Development* and supports Fundamental British Values.

Curriculum Statement

INTENT

West Heath Primary School's Computing Curriculum is broad and ambitious, and designed to give all our pupils the knowledge and cultural capital they need to succeed in life.

Early Years

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 are 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
- write and test simple programs
- use logical reasoning to predict the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of key stage 2 pupils are 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; generate appropriate inputs and predicted outputs to test programs
- 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; be discerning in evaluating digital content; respect individuals and intellectual property; 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.

IMPLEMENTATION

West Heath Primary School's Computing Curriculum is designed in a way that allows pupils to transfer key knowledge to long-term memory; it is sequenced so that new knowledge and skills build on what has been taught before and towards defined end points. Teachers are supported by The Teach Computing Curriculum; a comprehensive collection of materials produced to support teaching, facilitating the delivery of the entire English computing curriculum. The Teach Computing Curriculum was created by the Raspberry Pi Foundation on behalf of the National Centre for Computing Education (NCCE). Resources are tailored to each individual teacher and school setting. The materials are suitable for all pupils irrespective of their skills, background, and additional needs.

Our key principles of implementation include:

- Teachers have expert knowledge of the subjects they teach
- Teachers present key concepts clearly and invite appropriate discussions
- Teachers check pupils' understanding effectively, identifying and correcting misunderstandings
- Teachers ensure that pupils embed key concepts in long-term memory and apply them fluently
- Teachers enable pupils to transfer key knowledge to long-term memory, sequence the learning and ensure that it is building towards the defined end points
- Teachers use assessment to check pupils' understanding
- Teachers use assessment to help pupils embed and use knowledge fluently, develop their understanding, and not simply memorise disconnected facts.

Research-informed

The subject of computing is much younger than many other subjects, and as such, there is still a lot more to learn about how to teach it effectively. To ensure that teachers are as prepared as possible, the Teach Computing Curriculum builds on a set of pedagogical principles, which are underpinned by the latest computing research, to demonstrate effective pedagogical strategies throughout. To remain up-to-date as research continues to develop, every aspect of the Teach Computing Curriculum is reviewed each year and changes are made as necessary.

Progression across key stages

All learning objectives have been mapped to the National Centre for Computing Education's taxonomy of ten strands, which ensures that units build on each other from one key stage to the next.

Progression across year groups

Within the Teach Computing Curriculum, every year group learns through units within the same four themes, which combine the ten strands of the National Centre for Computing Education's taxonomy.

This approach allows us to use the spiral curriculum approach to progress skills and concepts from one year group to the next.

Assessment

Formative assessment

Every lesson includes formative assessment opportunities for teachers to use. These opportunities are listed in the lesson plan and are included to ensure that misconceptions are recognised and addressed if they occur. They vary from teacher observation or questioning, to marked activities.

These assessments are vital to ensure that teachers are adapting their teaching to suit the needs of the pupils that they are working with, and you are encouraged to change parts of the lesson, such as how much time you spend on a specific activity, in response to these assessments.

The learning objective and success criteria are introduced at the beginning of every lesson. At the end of every lesson, pupils are invited to assess how well they feel they have met the learning objective. This gives pupils a reminder of the content that has been covered, as well as a chance to reflect. It is also a chance for teachers to see how confident the class is feeling so that they can make changes to subsequent lessons accordingly.

Summative Assessment

When we assess, we want to ensure that we are assessing a pupil's understanding of computing concepts and skills.

Observing learning

To capture summative assessment data of pupils, we recommend using the success criteria in each lesson and capturing some of the following while the lesson is taking place:

- The work that pupils complete (saved on student share in the class folder as appropriate)
- Conversations or discussions that you have or hear during an activity
- Photographs of the work that pupils produce during an activity
- The pupils' self-assessments at the end of the lesson

This data is to support teachers' assessments of the pupils' understanding of the concepts and skills that were taught in the lesson. This is recorded on FFT assessment site used for school assessment.

Inclusion

Inclusive and ambitious

The Teach Computing Curriculum has been written to support all pupils. Each lesson is sequenced so that it builds on the learning from the previous lesson, and where appropriate, activities are scaffolded so that all pupils can succeed and thrive. Scaffolded activities provide pupils with extra resources, such as visual prompts, to reach the same learning goals as the rest of the class. Exploratory tasks foster a deeper understanding of a concept, encouraging pupils to apply their learning in different contexts and make connections with other learning experiences.

As well as scaffolded activities, embedded within the lessons are a range of pedagogical strategies which support making computing topics more accessible

Each pupil's access to technology varies greatly dependent on the nature of the activity they are involved in. Pupils have lessons allocated to Computing each week / half term using a mixture of unplugged activities and a range of technology, including: Laptops, iPads and Programming equipment

In addition to discrete Computing sessions, opportunities to develop and extend Computing capability are provided in other curriculum areas and technology is used to support most other subject areas.

All children have equality of access to appropriate technology in order to develop their personal Computing capability. When children are working in groups, we endeavour to ensure that their hands-on experience is equitable. We check resources, software and documentation to ensure that gender and ethnicity are reflected in a balanced way without stereotyping.

The SEND lead and Computing Subject Leader jointly advise teachers on examples of technology which can be provided to support individual children with particular physical, linguistic and educational needs, including gifted and talented pupils. Where appropriate, an external specialist is used to assess a child's specific needs.

Children with access to technology at home are encouraged to use it for educational benefit and online safety guidance is offered to both pupils and parents where appropriate. The school has identified those pupils who have limited or no access to appropriate technology outside of school and provide additional opportunities for these pupils to loan equipment.

Safeguarding Children: Online Safety

At West Heath Primary School we believe that the use of technology in schools brings great benefits. To live, learn and work successfully in an increasingly complex and information-rich society, our children must be able to use technology effectively. The use of these exciting and innovative technology tools in school and at home has been shown to raise educational standards and promote pupil achievement. Yet at the same time we recognise that the use of these technologies can put young people at risk within and outside the school.

The school has developed a separate policy which details our approach to online safety and safeguarding children and staff when using technology both within and beyond the school. It includes reference to the online safety elements of the National Curriculum for Computing and the statutory Relationships and Health Education curriculum. It takes into account the government's '[Teaching online safety in schools](#)' guidance and '[Education for a Connected World](#)' from the UK Council for Internet Safety.

Role of the subject leader

Monitoring

The Computing Subject Leader follows a systematic and regular programme of evaluation and monitoring of the Computing curriculum, across the school. This is so that she / he can monitor the quality of education being provided to all pupils, including:

- Checking that the school's curriculum 'Implementation' matches its 'Intent'
- Evaluating the success (or otherwise) of curriculum planning and delivery
- Having an awareness of impact and be able to demonstrate progression and attainment
- Having an overview of resource and staff training needs

Monitoring is completed via a variety of methods including:

- Observations
- Collecting and analysing planning
- Work scrutinies
- Gathering information from observations of other subjects
- Pupil interviews / pupils voice

- Staff interviews / feedback

Review and Monitoring:

The subject co-ordinator, along with the senior leadership team are responsible for monitoring the standards of children's work and the quality of teaching. The co-ordinator should support colleagues in the teaching by addressing CPD needs and by giving them information about current developments in the subject, and by providing a strategic lead and direction for the subject in the school. The subject co-ordinator is also responsible for reviewing developments identified on the School Improvement Plan, evaluating strengths and weaknesses in the subject, and indicating areas for further improvement.

Through lesson observations, work scrutiny, pupil voice and learning walks; compliance with this policy will be monitored and annual reviews will take place to ensure the Science policy accurately reflects Science teaching and learning at West Heath Primary School.

