Computing Policy - Hazel Slade Primary Academy

Introduction

Our Computing Curriculum is taught from Foundation stage to Year 6 and children learn numerous skills. These skills are built upon year on year, until the end of year Key Stage 2 where children will emerge accomplished in many aspects of computing. Children in all key stages learn computer programming and coding, testing and debugging their apps as they go.

We have a variety of resources to support learning both in computing lessons and across the curriculum. We have a computing suite for Key Stage 1 and Key Stage 2 with PCs, laptops and ipads available. The computing suite is time tabled ensuring every class has the opportunity to work in the computer suite on a regular basis. Classrooms are resourced with interactive whiteboards, laptops and a teaching PC, all of which are used to enhance children's learning. The school also makes use of shared resources such as iPads and laptops which can be used within lessons or as part of group work. Lunchtime coding and animation clubs are open to children from Year 2 to Year 6 run by our school's ICT lead and digital monitors.

Statement of intent

Hazel Slade Primary Academy values the fundamental part that technology plays in the life of the school.

We will strive to keep children safe on line and provide them with the knowledge and tools to do so. We will also empower parents, carers and the wider community with up to date information regarding keeping children safe online. We recognize the unique contribution that e-learning makes to the motivation and effectiveness of learners in our school and the role that the school has in preparing pupils for their future by improving their knowledge and understanding of how technology is an aid to learning. The dual delivery of a computing curriculum and e-learning to support other curriculum areas will empower pupils to learn creatively through innovative and flexible provision, directed by a progressive and differentiated syllabus. We will use IT and computing to empower staff to work more efficiently, creatively and effectively to improve their teaching and the assessing of the pupils in their class. IT will be an integral communication tool within the school and to the wider community.

Computing Policy - Hazel Slade Primary Academy

Our 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 an 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
- 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.

Computing Policy - Hazel Slade Primary Academy

Implementation

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.

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 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
- write and test 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
- 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 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; 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 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. Resources if not classroom based are located in the computing suite. A service level agreement with BTSA 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 has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- There is computing suite of desktops, laptops and iPads
- There is an iPad Sync & Charge cabinet in school containing USB ports
- Internet access is available in all classrooms.
- The computing suite, 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.
- The school has a computing technician who is in school once a week.
- A governor will be invited to take a particular interest in computing in the school.

Computing Policy - Hazel Slade Primary Academy

Planning

Foundation stage to Year 6 pupils use the Planning grids (Year group specific 'I can' statements) appropriate to their year group/s. These grids fully meet the objectives of the National Curriculum for Computing and allows for clear progression in computing. Pupil progress towards these objectives will be recorded by teachers as part of the school/academy recording system.

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/Impact

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. The school also uses the year group specific 'I can' statements on the whole school assessment grids as a guide. 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'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

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.

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

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

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.
- 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.

Computing Policy - Hazel Slade Primary Academy

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 electrical appliances in school are PAT tested regularly.

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
- e-safety guidelines will be set out in the e-safety policy & Acceptable Use Policy

Security

We take security very seriously. As such:

- the computing technician will be responsible for regularly updating anti-virus software.
- 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

Computing Policy - Hazel Slade Primary Academy

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. Parents will be made aware of issues surrounding e-safety and encouraged to promote this at home.

L.Stubbs – Computing Lead/Head of KS2

Reviewed: July 2020

Computing Policy - Hazel Slade Primary Academy

Computing Policy - Hazel Slade Primary Academy

Computing Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	E-safety: Using the internet safely	Digital Literacy & E-safety: using a computer/device	Coding with Codeapillars/Beebots	Digital Literacy: bug hunters	Digital Literacy: potty painters	Coding: Scratch Jnr - introduction and fundamentals
Year 2	E-safety: Staying safe on the internet	Digital Literacy & E-safety: using a computer/device	Coding: Scratch Jnr - introduction and fundamentals	Digital LIteracy - using a computer	Digital Literacy: taking and using photos	Coding: Scratch Jnr - introduction and fundamentals
Year 3	E-safety: Google Share with care	Digital Literacy & E-safety: using a computer/device	Digital Literacy:Explore a Topic with Research and Collaboration	Coding: Animations - Space	Coding: Sound and music - Rock band	Coding: project
Year 4	E-safety: Google Don't fall for fake	Digital Literacy: Research and develop a topic	Coding: Interactive - Chatbot	Coding: Game - Boat race	Digital Literacy: Childnet video competition	Coding: project
Year 5	E-safety: Google Secure your secrets	Digital Literacy: Plan an event	Coding: Scratch - Space Junk Game	Coding: Catch the Dots Game	Digital Literacy: Childnet video competition	Coding: project
Year 6	E-safety: Google It's cool to be kind	Digital Literacy: Explore a Topic with Research and Collaboration	Coding: scratch maths Building with Numbers	Coding: Scratch Memory game	Digital Literacy: Childnet video competition	Coding: project