The Whiteoak Academies of Hannah More Infant & Grove Junior Schools

Growing and learning together, aspiring to excellence.

Computing Policy

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 the Whiteoak Academies we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning of 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.

Rationale

The school believes that IT, computer science and digital literacy:

- Are essential life skills to fully participate in the modern digital world.
- Allows children to become creators of digital content rather than simply consumers of it.
- 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.
- Has the flexibility to meet the individual needs and abilities of each pupil.

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 from 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 programmes in order to solve such problems.
- Are responsible, competent, confident and creative users of information and communication technology.

Objectives

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.

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 different 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 objections 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. Computing network infrastructure and equipment has been sited so that:

- There is a computing suite of 18 PC's.
- There is a small computing suite of 8 computers for infants.
- Each class from year R to year 6 has an allocated slot one session per week for teaching computing as a discrete subject.
- The computer suite and learn pads 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 support with a teacher.
- The school has a designated LSA to support IT maintenance and an outside IT support provider (2IT).

Planning

Lessons are planned using the National Curriculum document and the Somerset Elim SOW (KS1). KS1 classes use "Espresso coding" to develop coding skills.
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 those requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum.

Assessment and Record Keeping

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing. The infants use Somerset ''I can '' statements as a guide when assessing pupils. Assessing computing is an integral part of teaching and learning and key to good practice.
Assessment should be process orientated – reviewing the way that techniques and skills are applied purposefully by the 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 is be recorded for all pupils over the term 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.
The children's work is saved on the school network. Other work may be printed and filled 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 is through planning, pupil discussion and evaluating pupil work.

The role of the Subject Leader

There is a computing subject leader for Infant and Juniors 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 the impact of teaching and planning following the schools monitoring programme.
- Monitor the children's progression in computing, looking at examples of work of different abilities.
- Communicate the financial needs of the ICT curriculum to the overall school budget manager.
- 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 encouraging staff to share this enthusiasm.
- Keep parents and governors informed of 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.
- Provide equality of opportunity using a range of teaching approaches and techniques.
- Use appropriate assessment technique and approaches.
- Set suitable targets for learning as outlined in the inclusion policy.
- Maintain up to date assessment records.

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, and communications and teaching resources.

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.

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 or for direct learning platforms such as Rock star times tables and Nessy. Parents will be made aware of issues surrounding on line safety and encouraged to promote this at home.

Conclusion

Pupils will make good progress with the statutory expectations outlined in the National Curriculum and EYFS framework and will develop effective transferable skills in computing. They will know how to use ICT safely.

Related Documents
All curriculum policies/ online safety & technical security policy. Acceptable use statement.

Date Policy Reviewed: January 2020

Date of next review: January 2022

The Whiteoak Academies are committed to considering the impact of this policy on equality, and the possible implications for pupils and staff with protected characteristics, as part of our commitment to meet the Public Sector Equality Duty (PSED) requirement to have due regard to the need to eliminate discrimination, advance equality of opportunity and foster good relations.