



# **ALLENDALE PRIMARY SCHOOL** **COMPUTING POLICY**

**Governor for Computing: Mr G Lee**

This policy should be read in conjunction with our Online Safety Policy, Data Protection Policy, Anti-Bullying Policy, Acceptable Use Policy.

## **Equalities Information**

This policy should be read in conjunction with our school's 'Equalities Policy' and 'Equalities Information and Objectives'. We welcome our duties under the Equality Act 2010 to eliminate discrimination, advance equality of opportunity and foster good relations in relation to age (as appropriate), disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation.

## **Rationale**

At Allendale Primary School, we aim to inspire all children to reach their full potential, academically, socially and emotionally. In Computing, this means ensuring a curriculum that is fully inclusive of all children. As technology is an integral part of everyday life, we at Allendale Primary School, feel that each child should experience all aspects of technology; from the use of computers and laptops to exploring tablets and other technical devices. We intend to expose children to different uses of technology that they may not experience outside of school, and ensure that we are challenging their technology-based skills. We want to ensure that children build up a bank of technology-based vocabulary, alongside a clear understanding of it, that will allow them to function confidently within an ever more technology focused world. We recognise that children have an increasing access to a range of technologies, including the internet. Due to this, children need to have a developing understanding and awareness of ever-changing issues relating to Online Safety, (see our Online Safety Policy), as they progress through the school. From this, children will be able to make appropriate choices in taking the steps necessary to make sure that they are safe and supported if things go wrong.

## **Entitlement**

This Computing Policy relates to all pupils attending Allendale Primary School. All children have the right to access all elements of the National Curriculum, appropriate to their abilities in tandem with the school's relentless focus on high standards and expectations of all pupils.

## **Our Intent, Implementation and Impact in Computing**

### **Intent**

At Allendale Primary School, we aim to prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for an ever-changing digital world. Knowledge and understanding of ICT is of increasing importance for children's future both at home and for employment. Our Computing curriculum focuses on a progression of skills in digital literacy, computer science, information technology and online safety to ensure that children become competent in safely using, as well as understanding, technology. These strands are revisited repeatedly through a range of themes during

children's time in school to ensure the learning is embedded and skills are successfully developed. Our intention is that Computing also supports children's creativity and cross curricular learning to engage children and enrich their experiences in school.

### **Implementation**

Our whole curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to flourish to become the very best version of themselves they can possibly be. We teach the National Curriculum, supported by a clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children. To ensure a broad range of skills and understanding, Computing is taught across three main strands: digital literacy, computer science and information technology. As part of information technology, children learn to use and express themselves and develop their ideas through ICT for example writing and presenting as well as exploring art and design using multimedia. Within digital literacy, children develop practical skills in the safe use of ICT and the ability to apply these skills to solving relevant, worthwhile problems for example understanding safe use of the internet, networks and email. In computer science we teach children to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Also to analyse problems to computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. We also teach a progression of Computing vocabulary to support children in their understanding. At Allendale Primary School, we give children access to a wide range of good quality resources and provide cross curricular opportunities for children to apply their Computing knowledge and skills. Online safety is taught within Computing each year. Online safety procedures are communicated with all staff and parents.

### **Early Years Foundation Stage**

The children in EYFS have access to age appropriate software such as apps on tablets, programs on the computers and Chromebooks and physical resources such as BeeBots that can be programmed by the children. Children will be exposed to the different technology used in day to day life and how different tasks require different equipment. The children will learn about cause and effect, technology in the world around them, use of the internet and the parts of a computer and tablet and their different functions. Teachers will facilitate children to use equipment carefully and safely. Additionally, children in the Early Years are taught the fine motor skills to effectively use technology.

### **KS1 and KS2**

The topics studied in Computing are planned to build upon prior learning. We offer opportunities to children of all abilities to develop their skills and knowledge in each unit. Progression is built into the sequence of learning so that the children are increasingly challenged as they move up through the school.

Computing is taught in Key Stages 1 and 2 through:

High quality computing lessons that engage and inspire children in the three areas of Computer Science, Information Technology and Digital Literacy.

### **Computer Science**

**Computer Science is the foundation.** It is the core of Computing where our pupils are taught how digital systems work and how to use this knowledge to program. They learn the principles of computation and information.

Pupils are taught the principles of:

- How computer systems work;
- Finding and fixing mistakes in a program (de-bugging);
- Using logical thinking to solve problems;
- Sequencing instructions (algorithms) to make something happen (programming).

### Information Technology

**Information Technology is the application.** Children use their Computer Science knowledge to create programs, systems and content. Pupils have the knowledge to:

- Create programs;
- Create content;
- Store and manipulate content;
- Retrieve digital content (searching).

### Digital Literacy

**Digital Literacy are the implications.** Children become digitally literate to use and develop their ideas through Information Technology. This will enable them to become active members of the future workforce. Pupils will become digitally literate so that they are:

- Prepared for the future workplace;
- Responsible and safe users;
- Competent, confident and evaluative.

Digital Literacy is taught continually throughout the year, for example, during assemblies and special days such as Safer Internet Day.

Cross-curricular links are appropriately made in other subjects, where Computing skills are applied.

Children are taught how to use technology safely by following the correct health and safety procedures.

### Impact

The implementation of this curriculum ensures that when children leave Allendale Primary School, they are competent and safe users of ICT with an understanding of how technology works. They will have developed skills to express themselves and be creative in using digital media and be equipped to apply their skills in Computing to different challenges going forward.

Pupils will be able to:

- Design, write and de-bug programmes 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.

- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- Understand computer networks, including the internet; how they can provide multiple services, such as worldwide web; and the opportunities they offer for communication and 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 of digital 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 and unacceptable behaviour; identify a range of ways to report concerns about content and contact;
- Enjoy using technology to develop their learning and ideas;
- Apply British Values to ensure they use technology safely and respectfully at all times.
- Become more independent in key life skills such as problem-solving, logical thinking and self-evaluation.

After the implementation of this robust Computing curriculum, children at Allendale Primary Primary School will have developed the knowledge, skills and understanding to help them access and use a range of technology in a safe and creative way.

Children's skills will have progressed to enable them to not only have met the requirements of the National Curriculum but to also enjoy using technology to develop their own ideas. From this, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation will become second nature.

### **More Able and Talented Learners**

The Computing Coordinator will promote the following key strategies for maximising progress and enabling learners to meet their full potential:

- The use, by all, of open-ended questioning, where a learner's first response may then be further developed and so encourage deeper thinking.
- Valuing a growth mindset that encourages learners to risk failure. Instead, viewing it as a crucial part of the learning process that avoids the pitfalls of playing it safe, and success meaning only doing things that they can get completely right or find easy.
- Encouraging the provision of open-ended opportunities for learners to take more ownership of the direction or form that their learning takes.
- Praising high levels of effort, progress and attainment whilst making sure that a focus on the next steps is a valued part of the ongoing learning process.

### **Special Educational Needs and Disabilities**

Pupils with special educational needs and disabilities have the same computing entitlement as all other pupils and are offered the same curriculum. However, particular application/tools are used for:

- Pupils with learning difficulties who need to be motivated to practise basic skills regularly and intensively.

- Pupils with physical disabilities and communication difficulties.

### **Assessment**

We consider that assessment is part of the whole school curriculum. It is the responsibility of all staff and should provide a supportive framework for teachers and children. Assessment is not just about the National Curriculum, but needs to take into consideration all Computing learning which is an outcome of the school curriculum. There is ongoing assessment for learning (AFL) and formative assessment of all children, ensuring that the development of concepts, skills and attitudes is measured through everyday teaching in a variety of contexts.

Teachers will need to make judgements about children's abilities. The judgements must be supported by evidence which can be understood by other teachers, by parents and by the children themselves. Evidence of ability will be demonstrated by children in the course of their learning.

The impact of learning will be assessed using:

- Teacher assessment;
- Monitoring by the Computing Subject Lead and through learning walks, planning, work scrutinies and pupil interviews;
- Information is gathered regularly from staff, parents and children to evaluate the effectiveness of the learning and experiences we provide and how we can develop further.

### **Monitoring and Evaluation**

The monitoring of Computing teaching and learning in our school will take place through the:

- monitoring of short term planning by the Computing Coordinator;
- observations and Learning Walks by the Computing Coordinator and Headteacher where appropriate;
- discussion during curriculum development staff meetings in order to further develop provision and practice, respond to queries, check progress, review resources etc.;
- informal discussions between staff and the Computing Lead;
- the completion of any whole school Computing project where work/evidence is gathered, across the whole range of ages in the school;
- scrutiny of files, displays and any other evidence of achievement, by the Computing Coordinator and Headteacher;
- pupil interviews conducted by the Computing Coordinator;
- checking of children's standards of work against agreed criteria e.g. teacher assessment.

Teacher assessments are moderated by the Computing Coordinator to ensure parity.

The Computing Coordinator works alongside teachers to provide tailored support to discuss, plan and implement a range of assessment and moderation strategies.

### **Continuing Professional Development**

The Computing Coordinator attends NCCE Network Meetings in order to ensure that the staff are aware of the latest information and curriculum developments in Computing.

Staff are also provided with regular, planned, internal and external CPD opportunities where relevant and as appropriate.

### **Our Governing Body**

The Governing Body will provide support and challenge and are kept up to date with developments in Computing through meetings with the Computing Coordinator, through the Headteacher's Report to Governors, subsequent discussions during Full Governing Body Meetings.

The Governing Body will be provided with regular updates re: the implementation and monitoring of this policy. The Governing Body will ratify and review the policy.

### **Maintenance**

Maintenance is carried out by our school's contracted ICT Technician who visits the school each month to give technical support and maintain the network to its optimum capability.

### **Health and Safety**

When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils should be taught the appropriate and safe use of all equipment, especially scanners, and photocopiers due to the bright lights.

### **Reporting**

Information about children's progress with regard to Computing is communicated to parents during parent consultation meetings and as part of pupils' individual annual reports.

### **Conclusion**

At Allendale Primary School, a whole range of experiences and opportunities will be provided for all pupils across a broad and balanced curriculum which reflects school, local, national and global perspectives.

The curriculum offer is routinely reviewed to monitor its Intent, Implementation and Impact. All children have the right to a high-quality education; our Computing Policy is designed to ensure that all pupils have access to this right.