

## **A POLICY FOR COMPUTING IN SCHOOL**

### **RATIONALE**

A high-quality computing education equips children to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.

The core of computing is computer science, in which children are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, children are equipped to use information technology to create programs, systems and a range of content.

Computing also ensures that children become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

### **Aims**

At Alderley Edge Community Primary, we believe that every child should have the right to a curriculum that champions excellence; supporting children in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school.

We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of children; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our children.

### **Our aims:**

- Provide an exciting, rich, relevant and challenging Computing curriculum for all children.
- Teach children to become responsible, respectful and competent users of data, information and communication technology.
- Provide technology solutions for forging better home and school links.
- Enthuse and equip children with the capability to use technology throughout their lives.

- Teach children to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Utilise computational thinking beyond the Computing curriculum.
- Give children access to a variety of high quality hardware, software and unplugged resources.
- Equip children with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- Exceed the minimum government recommended/statutory guidance for programmes of study for Computing and other related legislative guidance (online safety).

### **Safeguarding: Online Safety**

Online safety has a high profile at Alderley Edge Community Primary for all members of the school community. We ensure this profile is maintained and that pupil needs are met by the following:

- A relevant up-to-date online safety curriculum which is progressive from Early Years to the end of Year 6
- Through our home/school links and communication channels, parents are kept up to date with relevant online safety matters, policies and agreements. They know who to contact at school if they have concerns.
- Data policies which stipulate how we keep confidential information secure.
- A curriculum that is threaded throughout other curriculums and embedded in the day-to-day lives of our children.
- Children, staff and parents have Acceptable Use Policies which are signed and copies freely available.
- Training for staff and governors which is relevant to their needs and ultimately positively impacts on the children.
- Our online safety policy (part of our safeguarding policy) clearly states how monitoring of online safety is undertaken and any incidents/infringements to it are dealt with.

- Regular monitoring steers changes and informs training needs.
- Filtering and monitoring systems for all our online access.

### **Curriculum**

As a school, we have chosen the Purple Mash Computing Scheme of Work. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all children to achieve to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing.

### **Subject content**

#### **Early Years**

We aim to provide our children with a broad, play-based experience of Computing in a range of contexts. We believe the following:

- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay
- Children gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices or control remotely operated toys
- Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language.

#### **Teaching**

Each year group is expected to learn computing and by the end of each Key Stage the children are expected to know, apply and understand the following Programmes of Study from the National Curriculum.

#### **Key stage 1**

Children are taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs

- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- 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.

### **Key stage 2**

- Children should be taught to:
- design, write and debug 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
- 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 the world wide 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/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

### **Teaching Time**

There is no designated amount of time that each year should use IT or taught Computing during an 'average' week.

However, each teacher should plan sufficient time during the course of a term and over a school year to enable the children in their class to make good progress towards achieving the outcomes as set out in the programmes of study detailed above.

### **Wider School Curriculum**

Computing is delivered as a discrete subject and through other curriculum areas. It is also used as a vehicle to enable all children to achieve the school's core drivers.

### **Core Drivers - ALPS**

*Our core drivers underpin our curriculum and are our intent that will enable us to shape the curriculum around the needs and wants of our school and the children.*

- **Academic Excellence** – our curriculum strives for excellence. We know that only our best is good enough and we work hard to maximise progress in learning for all children regardless of their starting points— academic, social and emotional, so that they can be the best they can be and make a positive difference to themselves and others in their community.
- **Life Long Learning** – our curriculum allows children to develop learning skills: readiness to learn, resilience, reflectiveness and resourcefulness to be the best learners they can be so that they are prepared for the challenges we will face.
- **Possibilities and Risks** – our curriculum allows children to explore what is possible to be achieved when they identify goals based on consideration of people as unique individuals, with their own passions and ideas. We challenge children to extend their boundaries and develop independence.
- **Social Intelligence** – our children learn how to appreciate and respect differences and celebrate the richness of the diversity in our community and beyond, recognising all the benefits that this brings.

### **Homework**

School is making increasing use of IT on site and this expectation is being developed within the home too. Children are able to access Purple Mash from home as well as accessing homework on websites (e.g. Gregtang Maths, My Maths, Timestable Rockstars). All children have their own Microsoft Teams accounts with access to Office 365 to support learning at home.

### **Assessment and recording of children's progress.**

Formative assessment is used to guide the progress of individual children in their use of ICT. This involves identifying each child's progress, determining what they have learned and what, therefore, should be the next stage in his/her learning. Formative assessment is mostly carried out informally by teachers in the course of their teaching.

Each child's work is kept in their own area on Purple Mash or incorporated into other curriculum books. A portfolio of work across the school is kept by the Computing Lead Teacher, which will contain examples of assessed work.

Progression will be demonstrated by children carrying out more complex tasks, applying more advanced skills, becoming more independent, confident, and by using more sophisticated software or software in a more sophisticated way.

Class teachers are responsible for maintaining on-going records of attainment for the children in their own class.

### **Remote Learning**

The school has a remote learning policy (see 113. Remote Learning Policy)  
Children have access to their own Microsoft Teams accounts that also provide access to Office 365. They are able to retrieve tasks and upload completed work for marking and feedback. At Alderley Edge Community Primary, we ensure that those children without access to appropriate hardware or adequate Wifi at home are provided with appropriate IT resources or are able to access learning on site.

### **Monitoring, Evaluation and Review**

The Computing lead teacher, in consultation with the head teacher and staff, will present the next review and evaluation of this document to the Governors for discussion and agreement on the effectiveness of this policy following the agreed timetable in the policy framework.

### **Links to the school's information management system (SIMS)**

The use of the SIMS is not included as part of this policy, but we consider it important that all staff are seen to use and apply IT confidently in their daily work. (See Policy 25 – Acceptable Use of ICT)

### **Roles and responsibilities**

The roles and responsibilities with regards to IT are as follows.

The head teacher is responsible for:

- Monitoring 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 Leader's Action Plan

- Securing technical support service contracts and infrastructure maintenance contract
- Approving CPD and training which is in line with the whole school's strategic plan
- Approving budget bids and setting the
- 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 description for Computing
- Ensuring any government legislation is being met

The Computing Lead is responsible for:

- Raising the profile of Computing for all stakeholders
- 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 Governing Body/Head/Staff
- Auditing the needs of the staff in terms of training/CPD
- Actively supporting staff with their day-to-day practice
- Seeking out opportunities to inspire staff in developing their practice through modelling and sharing new ideas, approaches and initiatives
- Attending training and keeping abreast with the latest educational technology initiatives
- Creating Action Plans for Computing and supporting a long-term vision which feeds into the whole school development plan.
- Using nationally recognised standards to benchmark Computing
- 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
- Overseeing the effectiveness of the technician
- Working as needed with the SENCO/Head Teacher to ensure online safety provision is above adequate and all legislation is in place

The headteacher and lead teacher are jointly responsible for:

- Purchasing / organising IT resources
- Reviewing the computing policy
- Meeting the Statutory requirements

The IT technician is responsible for:

- Conducts routine scheduled maintenance/updates on systems

- Making suggestions about future needs of school for hardware (and software as appropriate)
- Help and support the Computing lead in writing a development plan for hardware upgrade and replacement
- 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
- Supports the administration and set-up of online services including the school website

The class teachers are responsible for:

- Reading the computing policy document and implementing it in their lessons.
- Asking the Computing lead for help and advice.
- Checking that they have, and are familiar with, the software necessary to implement their part of the curriculum

The administration staff are responsible for:

- Maintaining the school website content
- Supporting procurement of resources and technical services
- Supporting the technician with some data management

### **Continuing Professional Development**

This will be provided as school based training or through courses run by outside agencies. The Computing lead will discuss with colleagues their training needs and encourage them to attend relevant courses or plan whole staff INSET through staff meetings or a Staff Development Day.

### **Assessment, Recording and Reporting**

Children' computing capability and work are assessed during each major experience in line with the programmes of study and reported to parents at the end of each academic year.

Children store work in their Purple Mash portfolios.

Teachers keep accurate records of pupil attainment by entering data into Insight Tracking for each child.

Tracking of attainment by using the 2Simple Computing Assessment Tool is used to inform future planning.



Children are encouraged to self, peer and group assess work in a positive way using online collaborative tools such as 2Blog in Purple Mash.

Formative assessment is undertaken each session/interaction in Computing and children are very much encouraged to be involved in that process. Through using the progression of skills documents and displays from 2Simple, both teachers and children can evaluate progress. Features such as preview and correct in Purple Mash are used to further support feedback and assessment

### **Differentiation**

Differentiation should be achieved both through differentiated activities and through differentiation of intended outcomes. For example children who are progressing rapidly should be encouraged to extend their computing experiences either through use of more challenging software, or simply an alternative software package to provide depth of experience, or by extending the task, which has been set. Children identified as Gifted and Talented will be referred to the Additional Needs Co-ordinator for extra support

### **Inclusion**

At Alderley Edge Community Primary School we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and SEN statement and non-statemented.

We place particular emphasis on the flexibility technology brings to allowing children to access learning opportunities, particularly children with SEN and disabilities. With this in mind, we will ensure additional access to technology is provided throughout the school day and in some cases beyond the school day.

### **Children with Special Educational Needs and Disability (SEND)**

Children with SEND benefit from using IT as it enhances access to the curriculum, and this in turn encourages motivation and the development of skills ensuring significantly higher achievements. Therefore, the opportunities to utilise IT are maximised.

### **Health and Safety**

It is imperative that all electrical equipment is kept in good working order. To ensure the health and safety of children and staff the following guidelines must be adhered to:

- Children should not be allowed to switch on the power at the mains
- Equipment should be situated away from water and wipe boards
- Children should always be supervised when using electrical equipment
- All plugs, leads and equipment should be checked regularly and tested for electrical safety in accordance with Local Authority guidelines.
- Children should not be allowed to carry heavy equipment
- Appropriate seating and work surface heights should be ensured appropriate to the size of children using them
- Adequate levels of lighting and ventilation should be ensured at all times

### **Child Protection**

Computer networks, including those, which may be accessed via the Internet, are an important aspect of information technology education. However, they present possible risks to the spiritual, moral and social development of children, particularly in terms of the nature of some of the material, which may be obtained via the Internet.

It is also important that any additional data storage devices brought in to the school are tested for viruses and that all staff are aware of the possibility that unsuitable images, stored on computer discs, may be brought into school by children. As this is such a fast-moving area, staff should seek advice the Headteacher if there are any aspects relating to child protection about which they are concerned.

In addition, virus checkers are installed on the school's computers by the school Technician.

### **Internet**

The children will be able to use the Internet to communicate.

During school, the children will be supervised so that appropriate sites are visited. We will also use relevant software, which ensures any unsuitable material is not available to or accessed by the children.

The school will ensure that a policy for safe Internet access and supervision is in place. The school management team has a duty to ensure that before using the Internet with children, all staff have an opportunity to discuss how they will deal sensitively with inappropriate use.

It is the responsibility of every class teacher to ensure children are safe when they have web access. Adult supervision is desirable with Foundation and Primary aged children. Teachers should vet web sites before use by children where appropriate.

### **Internet Security**

The school has an Internet Access Policy and a policy for Acceptable use of ICT equipment to protect all parties – the children, staff and the School

### **Resources**

- All resources are procured with the underlining considerations of value: The extent at which the resource impacts on learning and the material cost of this. Protocol details for procurement can be found in the Manual of Internal Financial Procedures held in the school office.
- The Computing Leader keeps up to date with the latest technology resources and will make informed decisions about possible procurement of them through their own research.
- A range of resources is available which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential.
- Suggestions for getting the very best out of the resources are made available to teaching and support staff by the Computing Leader.
- Resources are suitably maintained and replenished when needed, which is overseen by the Computing Leader.
- An itemised list of all resources is shared with staff and kept up to date by the Computing Leader.
- The Computing Action Plan details foreseen future resource procurement which is shared with senior leaders before the budget setting period.
- Audits of school resources are conducted regularly by the Computing Leader, which informs bidding for budgets allocations

### **Use of school hardware by employees**

The policy for Acceptable Use of IT Equipment and Data Protection Policy gives further guidance on this.

### **Conclusion**

Computers are the most widely used form of information technology in the world of work. Most children become aware of them incidentally, they are a natural part of their experience and as such computers should become a natural part of their learning process in school. We need to identify and address issues of interests within the world of work to enable the school to establish mutually beneficial business links.

In both Key Stages - in planning, teaching and assessing consideration should be given to the progression within an area of study and other parts of the curriculum.

**Other relevant policies**

- 36. Safeguarding and Child Protection
- 56. Policy for Teaching and Learning
- 65. PSHE
- 77. Acceptable Use of IT Equipment
- 82. Data Protection Policy
- 113. Remote Learning Policy

**Review:** every 3 years

**Next review:** January 2025