St Andrew's CE Primary School

Computing Policy

Summer 2022

Next review Summer 2023

ICT Policy Statement

Rationale

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. The study of computing is an essential part of the school curriculum, which extends and enhances learning in all subject areas. It enables learners to develop an understanding of how to locate, evaluate and use information. At St. Andrew's CE Primary School, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. This policy document is a statement of the aims, principles, strategies and procedures for the use computing within St. Andrew's CE Primary School.

The school believes that computing:

- Gives pupils immediate access to a rich source of materials.

- Can present information in new ways which help pupils understand, access and use it more readily.

- Can motivate and enthuse pupils.

- Can help pupils focus and concentrate.

- Offers potential for effective group working.

- Has the flexibility to meet the individual needs and abilities of each pupil.

As computing underpins today's modern lifestyle it is essential that all learners gain the confidence and ability that they need in this subject to prepare them for the challenge of a rapidly developing and changing technological world. The use of computing will also enhance and extend pupils learning across the whole curriculum whilst developing motivation and social skills. Learners will be taught to take every opportunity to use computing to develop an understanding of different cultures and lifestyles, in order to prepare them for life in a multicultural society.

Purpose and Aims

The aim of this policy is to communicate clearly to staff, parents, governors, visitors and pupils, how computing is approached by the school.

Through the use and teaching of computing our aims are:

- For pupils to confidently use computing with purpose and enjoyment;

- Provide a relevant, challenging and enjoyable Computing curriculum for all pupils;

- Meet the requirements of the national curriculum programmes of study for Computing;

- Use computing as a tool to enhance learning throughout the curriculum;

- To respond to new developments in technology;

- To equip pupils with the confidence and capability to use computing throughout their later life;

- To enhance learning in other areas of the curriculum using computing;

- To develop the understanding of how to use computing safely and responsibly;

- For children to become autonomous, and collaborative users of computing;

- To identify situations and opportunities where the use of computing is relevant, understand the capabilities and limitations of computing, evaluate the benefits and gain insight into the implications of its development for society;

- To help all children to achieve the highest possible standards of achievement;

- To see Computing as a creative and fascinating process in which children are encouraged to use their own initiative, imagination, reasoning and investigation skills;

- To foster a positive attitude towards Computing, enabling children to have a heightened interest and awareness.

The National Curriculum

The new 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.

Objectives   Early years

It is important in the foundation stage to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature computing scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. This is particular useful with 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.

Deeper Learning

We aim to ensure Deep Learning is gained through a broad and engaging curriculum which promotes challenge, critical thinking, problem solving opportunities, probing questions (which make children think deeply) and collaborative learning.

Progress is made when children know more and remember more. Our Computing curriculum clearly outlines what our children are expected to know, understand and retain over time. This can obviously relate to the development of a deeper understanding of the importance of Basic Skills/Non negotiables in all subjects as well as subject knowledge.

To support this aim, it is important that planning clearly includes key vocabulary, key questions, appropriate challenging activities/discussion to promote Deeper Learning. To help with this aim all must be aware of specific planning for each session at least 24 hours before in order for them to contribute to plans, amend and 'personalise' for any particular pupil or group.

Deep Learning should also manifest itself in regular homework tasks to raise parental awareness and encourage real challenge for all groups.

Planning

The school has created its own Computing Scheme of Work to deliver the new Computing National Curriculum. This curriculum will ensure progression and continuity of skills, concepts and knowledge development throughout the Foundation Stage and Key Stages 1 and 2. Pupil progress towards these objectives will be recorded by teachers as part of their class recording system. Individual teachers are responsible for short term planning and making appropriate use of computing in their own teaching through discrete lessons, laptop/iPad time, and incorporating opportunities to develop computing skills across the curriculum. It is essential that computing is integrated into everyday practice. Appropriate differentiation by the teacher will ensure that learners achieve to the best of their abilities.

Cross Curricular Planning

An important aim for the Computing curriculum is the intention that Comouting should be treated as a cross curricular activity. Therefore, objectives within the Computing Scheme of Learning make links to other subjects to highlight where computing skills can be used to develop skills in other subjects.

There should be an element of computing incorporated into all lessons, as far as possible, in accordance to 'Rainbow Principles'. It is essential that computing is treated as a classroom resource that every child should experience regularly. This puts an onus on every teacher to

be aware of the potential for using computing in his/her teaching and to ensure that the potential is exploited to the benefit of the children

Assessment

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the national curriculum to assess key computing skills each term. Assessing computing work is an integral part of teaching and learning and central to good practice. As assessment is part of the learning process, it is essential that pupils are closely involved. Assessment can be broken down into;

•   Formative assessments which 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' capability and provide a best fit. Use of independent open ended tasks, provide opportunities for pupils to demonstrate capability in relation to the term's work. 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 are below, within or secure in the learning objectives.

We record the results in our online assessment format and we use these to plan future work, to provide the basis for assessing the progress of the child and to pass information on to the next teacher at the end of the year.

Home School Learning:

The Home Learning Policy supports the Teaching and Learning Policy. It is a positive enhancement to learning and should be seen as such by pupils, teachers and parents. In order to promote this: All Home Learning tasks are set on Insight so pupils can access the tasks easily and parents can monitor the completion of the tasks and support their children effectively. In the case of children not being present in school (such as during an epidemic resulting in school closures), the use of home learning through email and access to Google Classroom will be used to reduce gaps in learning and will focus on differentiated nonnegotiable and basic skills tasks as well as other key areas and objectives essential to the Maths curriculum. In the case of a pupil being unable to access technology to view and complete work arrangements will be made for paper learning packs to be collected or posted to individuals. Marking and feedback must be completed as soon as possible.

Equal Opportunities

The school is committed to working towards equality of opportunity in all aspects of school life. We will ensure that all children are provided with the same learning opportunities whatever their 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 school's Equal Opportunities Policy. Particular needs are supported when and where necessary. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately. Our aim is to offer all our pupils a Computing curriculum that is relevant and differentiated to their needs and abilities, so that they all enjoy equal time with a range of computing applications in order to reach their full potential.

Every Child Matters

St. Andrew's is an inclusive school and, as such, this policy should be read in conjunction with the Every Child Matters policy statement.

Promoting and Supporting Mental Health and Wellbeing in Computing

Supporting mental health strategies is prominent at St. Andrew's CE Primary School. The teaching of computing lessons across the school, aim to compliment the objectives and strategies outlined in our PSHE and RSE curriculum. Promoting health and wellbeing in computing will consist of:

• Engaging computing lessons, with high quality teaching, including practical activities to inspire our children.

• Group and collaborative computing work, to enable discussion and communication whilst learning.

• Accurate differentiation of work in order to ensure challenge but also the opportunity for success at every level.

• Promoting pupils' independence through giving the opportunity to suggest ideas/ approaches to their computing work.

• Computing clubs available to children for enjoyment and wellbeing.

• The use of pupil questionnaires and pupil voice suggestions so that pupils feel valued and a part of our computing curriculum goals.

• Classroom environment which portrays warmth, good relationships and an atmosphere of

belonging.

• Encouragement and praise; sharing examples of great work.

• Projects which involve the whole family.

• Promoting the school's philosophy of 'Every child to be a champion in their own right'.

In order to ensure staff's health and wellbeing, support and training for computing is given to all staff. The development of detailed medium term plans, as well as planning and sharing resources in teams, helps to reduce teachers' workload.

Staff Continuous Professional Development (CPD)

The Computing co-ordinator (and team) will have access to specific training courses, as required, to keep up to date with new technologies and developments in order to continually move computing forward, disseminating information appropriately.

Other staff will be encouraged to attend courses, review resources and update themselves on information and approaches relevant to computing teaching.

INSET will be organised by the Computing co-ordinator (and team) as appropriate in line with new developments. Support staff will attend any whole school INSET training provided, be encouraged to attend courses and will be provided with INSET sessions of their own to develop individual knowledge and skills level.

Curriculum support can be sought from the Computing co-ordinator on a need to know basis.

At least one member of staff in each phase is completing a course to become a Google Certified Educator.

Regular meetings will be held to review knowledge and skill levels and to determine future requirements of all staff.

Health and Safety

The following should also be adhered to in accordance with the Health and Safety Policy:

- Children should not be given the responsibility of plugging in and switching machines on without a member of staff present.

- Food and drink should not be consumed near computing equipment in classrooms.

- Staff should ensure that the children are seated at the computers comfortably and be aware of the dangers of continuous use, e.g. eye / wrist strain.

- It is the responsibility of staff to ensure that classroom computing equipment is stored securely, switched off and out of sight at the end of the day, e.g. covering machines / ensuring blinds are closed.
- An adult must always supervise children when they are accessing information via the Internet. The service provider does filter information but staff are ultimately responsible for information accessed by pupils.
- Pupils will be taught basic rules of handling equipment prior to use.

Technical Support

Primary Tec provide our technical support. On-site support is provided when necessary however most issues can be resolved remotely.

Staff are encouraged to log any problems / issues as they arise via the online chat or email and inform the co-ordinator. It is also possible to contact Primary Tec via telephone (number available from the office or co-ordinator) for issues that need immediate resolution.

In the case of an emergency where the system does not work, Primary Tec would be contacted immediately to resolve the problem.

Resource Provision

Laptops: The school has 64 mobile chromebooks to be used throughout the school. All laptops are connected to an online network and have Broadband Internet access. Each classroom, including Nursery, has at least one laptop located in there at all times.

Interactive Whiteboards: Each classroom is fitted with an Interactive SMART Board and data projector.

Laptops: Every teacher has been provided with a Chromebook for classroom/personal use which they can take offsite provided that they have signed a disclaimer accepting full responsibility for the equipment whilst in their care, ensuring that the equipment is fully insured from the moment it leaves the school premises.

iPads: Every teacher has been provided with an iPad for classroom/personal use which they can take offsite provided that they have signed a disclaimer accepting full responsibility for the equipment whilst in their care, ensuring that the equipment is fully insured from the moment it leaves the school premises.

iPads: Each year group has 10-20 iPads to be used as a cross-curricular resource. All iPads are connected to the Internet and have a range of apps on them to enhance learning.

Peripherals: The school has a variety of peripherals available for use by staff and pupils. These include digital cameras, a portable data projector, BeeBots, Lego WeDo sets, digital microscopes, Coombers, CD players, televisions, remote control toys and metal detectors.

Security

- The Computing technician /coordinator will be responsible for regularly updating antivirus software.

- Use of computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.

- Parents will be made aware of the 'acceptable use policy' at school entry

- All pupils will be aware of the school rules for responsible use on login to the network and will understand the consequence of any misuse.

Data Protection

Any individual has the right in law to view information held about him / her on a computer system. Care should be taken about any sensitive information concerning child protection issues etc. If a report is composed and printed on the system, it should immediately be deleted and hard copies kept in the appropriate files in the care of the Child Protection Officers (currently the Head and L Harrison).

Monitoring ICT policy and practice

The effectiveness of the school approach to Computing education will need assessing. This will be monitored by the Computing Co-ordinator and team.

- Annual reports including teachers' assessment of pupils progress in computing;

- Children and Staff display increased confidence and understanding in computing mediums and their application;

- Regular staff evaluation of the scheme of learning.

Links to the School Development Plan (SDP)

The ICT co-ordinator produces annual ICT targets, relating to the targets within the SDP, to be fulfilled within that year. Further details about the development of ICT over the next year can be found in the ICT targets available from the ICT Co-ordinator.

Reviewing the policy

The everyday use of computing is developing rapidly, with new technologies being produced all the time. This policy therefore will be reviewed annually by the Computing co-ordinator (and team). The Computing co-ordinator will liaise with staff, both at staff meetings and informally, to monitor the effectiveness of the policy and scheme of learning.

Meetings with subject co-ordinators and the team will ensure that the use of Computing across the school is planned for and evaluated.

Co-ordination / Role of the ICT Co-ordinator and Team

Computing throughout the school is co-ordinated by the Computing Co-ordinator with the support of a Computing team. This entails fulfilling the appropriate responsibilities as outlined in the Computing co-ordinator job description.