**St Mary’s C of E School**

**Computing Policy**

**Date agreed:**

**Signed: Headteacher:**

**Signed: Chair of governors:**

**Date for review:**

**Policy proforma for St. Mary’s C of E Primary School**

1. **Rationale**

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 St Marys C of E, 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 to participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

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 to 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.

1. **Aims of policy**

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 them throughout their lives.

• Meet the requirements of the national curriculum programmes of study for computing at Key Stage 1 and 2.

• Respond to new developments in technology.

• Equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.

• Enhance and enrich learning in other areas of the curriculum using IT and computing.

• 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 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.

1. **Objectives**

Early years (see also Early Year’s policy)

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 support children in developing good 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.

1. **Responsibilities**

The Head Teacher will monitor and review the coordinator through subject appraisals. Their role will be to ensure that the curriculum is taught by teachers who are competent in the delivery of the new computing curriculum. The coordinator and head teacher will meet regularly to discuss staff training requirements and ICT resources needed to ensure progression.

The computing subject leader who is responsible for the implementation of computing policy across the school is Daniel King.

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.

•Manage the computing budget.

•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.

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 teaching resources.

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. High expectations for pupils are set and opportunities provided 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).

Teaching assistants will support the class teacher in all of the above and support individual children or small groups in computing.

1. **Cross curricular links**

Staff at St. Marys are aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated through all curriculum subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding.

1. **Planning**

The school will be using Rising Stars- Switched on to ICT - the whole-school scheme of work for Year 1 to Year 6 pupils. Rising Stars- Switched on to ICT fully meets 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 recording system. Staff will follow Rising Stars- Switched on to ICT planning guidance.

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.

1. **Resources**

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 or hall. A service level agreement with ICT 4 is currently in place to help support the subject leader to fulfil this role both in hardware and software. Computing network infrastructure and equipment has been sited so that:

•Every classroom from Pre-school to Y6 has a laptop connected to the school network and an interactive whiteboard with sound, DVD and video facilities.

•There is a computing suite with 12 desktops and a laptop trolley with 16 laptops.

•There is an iPad Sync & Charge cabinet in school containing 16 Ipads.

•Wireless Internet access is available in all classrooms.

•Each class from Pre-school to y6 has an allocated slot one afternoon per week and additional morning slots which can be booked weekly, for teaching computing as a discrete subject.

•The computing suite, laptops and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use.

* The school has invested in new software which helps deliver the new curriculum. Teachers have a range software which include some of the below:

Comic Life 2, I Can Present (Green screening), Flowol, Lego we do, scratch and Kodu (Programming and Control), Inkscape (Digital art) Garage band (Digital music), Microsoft Office 2014, 2 simple software; plus many educational apps on the IPADs.

• 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 every other week.

1. **Assessment**

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum through the Switched on to ICT assessment progression grid. 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.

Children’s work is assessed in computing by making informal judgments through observation of children during lessons. Once the children complete a unit of work, a summary judgment is made as to whether the child has yet to obtain, obtained or exceeded the expectations of the unit**.**

Results are recorded in assessment files and used to plan future work or to 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. There is also an evidence folder in each classroom to keep samples of the children’s work in a portfolio.

1. **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.

Time is allocated for the vital task of reviewing samples of children’s work and for visiting classes to observe teaching in the subject.

1. **Special Needs – key issues regarding children with SEN relevant to the policy**

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.

IT and computing is taught 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 opportunities are provided that enable all pupils to make progress. Suitable challenges are set whilst responding to each child’s individual needs. Where appropriate IT is used to support SEN children on a one to one basis where children receive additional support.

1. **Equal Opportunities**

All children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, all children 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.

1. **Health and Safety including risk assessments and e safety**

The school is aware of the health and safety issues involved in children’s use of IT and computing.

All fixed electrical appliances in school are tested by a Local Authority contractor every five years and all portable electrical equipment in school is tested by an external contractor every twelve months.

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

•Safety guidelines in relation to IWBs will be displayed in the classrooms

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

1. **Security**

We take security very seriously. As such:

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

•Use of IT and 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’ annually and asked to sign a copy of it at the initial parents evening.

•All pupils and parents will be aware of the school rules (differentiated for each Key Stage) 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, plus the sanctions for inappropriate use, will be displayed in classrooms, IT Suite and on the school website.

* All laptops and Ipads will be locked away in a secure unit at the end of the day.
1. **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.

1. **Governor involvement**

The governors will have an oversight of IT and computing through meetings with the subject coordinator and regular updates on the computing curriculum in governor meetings.