Norman Street Primary School Computing Policy

At Norman Street Primary we aim to ensure all learners are enabled to use technology in ways that are meaningful, engaging and suitable in a world that is increasingly dependent upon it. The use of new technologies has a marked impact on teaching and learning, and our School Vision is designed with this in mind to have a positive impact on all learners within our school. We consider it essential that all pupils gain the confidence and ability to prepare them for the challenges of a rapidly developing and changing technological world, and we will encourage the understanding via transferred skills, suitable for both the local and global community. We will all ensure that we use ICT to enhance and extend all children's learning across the curriculum whilst developing motivation, focus and social skills.

Through focused, specific and engaging lessons and opportunities pupils will be able to access a range of technologies and tools to further develop their knowledge and understanding across a range of topics through the use of ICT. This will be developed and further refined by all staff including teachers, senior leaders, the Headteacher and governing body to prepare all members of the school community with the confidence, skills and abilities that are required from 21st Century learners.

Our School vision is designed to drive our school forward, preparing all learners so that:

- ICT is used to inspire and enable learning in all curriculum areas
- Pupils and staff are producers of ICT and not simply consumers
- Pupils and staff have transferable skills that can be used across programs and platforms
- Pupils and staff have access to, and engage with, the wider global community to inspire learning

Pupils and staff are confident, skilled and safe users in all areas of ICT and Computing.

The purpose of the policy is to inform and provide a point of reference for the following:

- Teaching Staff/Support Staff
- Governors and Parents
- Members of the Inspectorate and LEA Officers
- Other /Agencies

Rationale

- Information and communication technology is concerned with storing, processing

and presenting information by electronic means.

- Information and communication technology is an important part of everyday life and has the potential to transform the lives of all involved in its' use. Therefore, each child within school will have regular and meaningful access to Computing resources in order to prepare them to use the full range of facilities.
- Computing provides a means of enhancing and enriching the learning *experience* of children and can strengthen and support traditional forms of teaching and learning, extending the range of educational opportunities for children.

Vision

Our vision at Norman Street Primary School is to confidently, successfully and routinely exploit the opportunities provided by Computing. By doing so, we will be delivering a Computing education that equips learners for life in the information age of the 21st century. In order to achieve this, we need to take account our mission statement, while carefully considering the following factors:

- Technology alone will not transform learning, but learning will not be transformed without it.
- Technology is a tool used in the service of learning rather than an end itself.

In order to accomplish this, at Norman Street Primary:

- We will build upon current good practice.
- We aim to produce highly motivated students who are in control of their own learning.
- We intend to utilise our highly skilled staff.
- We endeavour to maintain excellent strategic leaders throughout the school.
- We aspire to have a high quality, robust, infrastructure permanently in place.
- We aim to provide safe, secure environments.

Aims of Computing

The national curriculum for Computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- 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 of ICT

Subject and Content

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 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

Pupils 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

Processes and Skills

Children should acquire and develop the skills associated with using ICT to:

- Pass on ideas by communicating, presenting and exchanging information.
- Find things out and handle information.
- Make things happen by controlling and monitoring events.
- Try things out by modelling real and imaginary situations.
- Acquire and refine the techniques e.g. saving, copying, checking the accuracy of input and output needed to use ICT.
- Practise mathematical skills e.g. ordering numbers including negative numbers, measuring and calculating to an appropriate number of decimal places, drawing and interpreting graphs and bar charts in real contexts.
- Learn why numerical and mathematical skills are useful and helpful to understanding.
- Develop the skills of collecting first-hand data, analysing and evaluating it, making inferences or predictions and testing them, drawing and presenting conclusions, and use all these in their work with ICT.

Language and Communication

Children should:

- Develop language skills e.g. in systematic writing and in presenting their own ideas.
- Use the appropriate technical vocabulary.
- Read non-fiction and extract information from sources such as reference books or apps.

Values and Attitudes

Children should:

- Work with others, listening to their ideas and expertise and treating these with respect e.g. co-operating and collaborating when using a computer as part of a group to ensure that all contribute;
- Acknowledge the ownership of ideas and recognise the value of information held on computer systems e.g. recognising how much work has gone into producing a computer file, and how easily careless access can destroy it;
- Be aware of the security of their own and other people's information in electronic form e.g. recognising that they should ask before reading or copying from others' work;
- Recognise the importance of printed output e.g. keeping examples of graphics work safe so that source files may be easily identified when work is developed at a later date;
- Be creative and persistent e.g. when assembling a computer file from a large amount of source material;

- Consider the origin and quality of information and its fitness for purpose;
- Evaluate critically their own and others' uses within Computing;
- Recognise the strengths and limitations of using computers and its users e.g. recognising that a word processor is an effective and efficient tool to help writing, but, on occasion, handwritten text is more appropriate;
- Develop knowledge and understanding of important ideas, processes and skills and relate these to everyday experiences;
- Learn about ways of thinking and of finding out about and communicating ideas

Policy Guidelines

Implementation/ Organisation

Children need to be taught knowledge, skills and understanding. This will be achieved through each year group's scheme of work. The scheme of work is skills based and ties in with the Curriculum taught in each year group. Skills based work is also taught in other lessons, e.g. English, Maths, Science, Topic, etc, with cross curricular links established.

Planning is taken from PurpleMash, which follows the National Curriculum objectives for Computing.

Time (Recommendations)

The skills-based curriculum varies in length. It is at the discretion of the teacher to develop the scheme of work to suit the needs of the pupils. However, it is expected that every child is taught Computing each week.

For each Key Stage, recommendations are as follows.

In EYFS, Computing is covered through continuous provision

In Key Stage 1: approx.1 hour per week

In Key Stage 2: approx. 1 hour per week

The headteacher and governors of Norman Street Primary School believe Computing has a vital role to play and recommend that the time stated above is given to this curriculum area every week, by either teaching it explicitly or endeavouring to embed elements of the Computing curriculum within the wider curriculum.

Planning

Our Computing scheme of work is based on the teaching of a skills-based curriculum, supplemented by planning provided by PurpleMash which is then adapted at the class teachers' discretion. Computing is planned for in the Foundation Stage through the EYFS.

In line with our Assessment policy, assessment is ongoing and is used to inform planning. This is also taken from PurpleMash, and can be used to inform on individual performance to identify gaps and areas that require further teaching.

Assessments for each class should be completed at the end of each unit, and updated thereafter as appropriate, for example, should another Computing objective be covered in another subject. These assessments should be then saved to the relevant folder within the Assessment folder of G-Drive.

Foundation Stage

The EYFS establishes expectations for most children to reach by the end of the foundation stage. These goals provide the basis for planning throughout the reception year. Computing is taught via real experiences both indoors and outdoors, and supported by various electronic devices such as the laptops and iPads. Planned activities are supported by constant adult/child interactions.

Key Stages 1 & 2

In Key Stages 1 and 2, planning is in the form of a series of lessons relating to units of work taken from PurpleMash, and supporting the skills identified in our Progression of Skills document. Plans include learning objectives based on key skills, activities and outcomes as well as highlighting opportunities for assessment.

Features of Progression

To ensure children make progress in Computing all teaching should promote a variety of opportunities.

For example:

- Using single forms of information to combine different types, matching the form of presentation to the audience and what is being communicated;
- Using computing resources to replicate and enrich what could be done without Computers, e.g. playing a word game or drawing a picture; to using ICT for purposes that could not have been envisaged without it such as exploring 'what if' situations and modelling new ones, such as Google Earth to explore the world;
- Using everyday language to describe work with Computers, including increasingly precise technical vocabulary or ways of recording, such as through coding.
- Organising information as separate items e.g. a single graphic image to organising information in sequences and more complicated, interactive, structures e.g. a multimedia presentation or a database;
- Initial exploration of ideas and patterns to more systematic use of Computing for analysis and design.

Assessment / Record Keeping / Reporting

In accordance with our school assessment policy, record keeping and assessment is an ongoing activity. The work pupils do themselves will serve as a record for classes working on a unit, and can be saved to an online shared space, such as Showbie or within PurpleMash. This can then be accessed by class teachers to provide feedback relevant to the learning objective for each session.

When work is completed in other subjects using technology, children save their work to Showbie, which is a secure cloud-based storage solution. Showbie allows teachers to post work securely for pupils to complete, before marking and giving feedback.

Monitoring

ICT is to be monitored as part of the monitoring cycle, to be implemented as required by the School Development/Improvement Plan. This follows procedures outlined in the *Policy for Monitoring and Evaluation of School Effectiveness.*

Progression of Computing in the Curriculum

Planning must ensure that children use the Computing resources available in a wide range of situations so that they learn how and when to use ICT appropriately. Children need to be given the opportunity to discuss the advantages and disadvantages of information and communication technology for different purposes, both in school and beyond. This will allow them to make judgements in the appropriate uses of the equipment.

Progression is indicated by moving from using Computer resources as a direct tool in the completion of a task, to the critical view of the ways that they can be used in a wider context, for example picking an appropriate app to solve a particular problem and explaining why. The children will then be able to decide on the most suitable situation for the use of Computing as they progress through the school, applying this knowledge in different contexts.

There are three ways in which the teaching of ICT within the curriculum can be classified:

- Focus primarily on the development of Computing capability.
- Focus on both the development of Computing capability and the skills, knowledge and understanding of another subject.
- Using the Computing resources available in school, but with the focus primarily on the development of the skill, knowledge and understanding of another subject.

Each teacher's Mid-Term Plan indicates the Computing activities that will be involved during the term, in a Scheme of Work. The appropriate use of Computing within other subject areas will be identified in the Scheme of Work for that Curriculum area. The medium and short-term planning is either in the staff's teaching file, or in their Key Stage Planning file, and may identify opportunities with different learning objectives for individuals and groups of differing abilities. Key aspects of that unit of work will be addressed in the unit's Knowledge Organiser (where applicable) to help ensure a broad and balanced curriculum.

The integrated use of Computing throughout the school is planned for by staff, in consultation with the Computing Subject Leader, and is ongoing with the use of iPads and Chromebooks in order to support daily teaching.

Teaching and Learning Strategies for Computing

The teaching of Computing within the classroom situation can be approached in a number of different ways:

Individual teaching - to include one to one teaching

Whole-class and half-class teaching for demonstration, support teaching and exposition.

Group work - organised by comparable ability, mixed ability, friendship or through random selection. Group work allows intervention by teaching staff, as well as the very effective use of cascade learning.

Effective teaching, regardless of the organisation used within the classroom, requires a wide range of techniques to be utilised by the teaching staff. These include explaining, instructing, questioning, observing, assessing, diagnosing and providing feedback.

Entitlement, Equal Opportunities and Inclusion

Norman Street's inclusion policy aims to provide effective learning opportunities for all its pupils. Every pupil is entitled to access the Computing curriculum regardless of ability, gender or ethnicity.

When planning the curriculum all teachers have due regard to the following principles of inclusion: -

- Setting suitable learning challenges
- Responding to pupils' diverse learning needs
- Overcoming potential barriers to learning and assessment
- Differentiated tasks are set as appropriate with any necessary Individual Education Programmes for pupils with special educational needs.

Special Educational Needs and Computing

As with all children, full access will be given to the use of Computing in the curriculum in accordance with statutory requirements and the school's Special Needs Policy.

The school will explore the possible benefits of, and where practicable, secured access for the child to, appropriate information and communication technology. This may take the form of word processing facilities, word bank software, providing training in the use of that technology for the child, his or her parents and staff, and wherever appropriate, us at home. This includes a large variety of Accessibility features that are available depending on need.

In the case of children with special needs the computer can aid communication, as it does not necessarily rely on the spoken word. Computing can allow children with special needs to explore a variety of tasks before they are even able to manipulate a pencil or read. Careful use of Computing will allow all children to progress in areas in which they would probably have otherwise experienced frustration.

Gifted and talented children can use the computer/device to extend their abilities so that the final product is dependent upon their personal understanding of the use of Computing. The efficient use of Computing can help develop physical, intellectual, emotional and social skills for children of all abilities, and used carefully can have a particularly profound effect on children with special educational needs.

The fact that Computing encourages children to accept responsibility for their own learning, and due to its versatility, it can provide clear opportunities for differentiation.

Differentiation can be achieved as follows:

- By task - same topic, differing tasks and strategies or allowing access to particular features.
- By outcome - where work indicates different levels of achievement.
- By progression - a series of small structured tasks with increasing difficulty and decision-making skills.

The majority of programs within school allow children to explore at their own level of attainment. The use of a roller ball mice when using a laptop or dictation within some programs are ideal aids for children with additional needs. Classroom organisation, curriculum planning and the use of resources will take account of the requirements of children with Special Educational Needs, through discussion with subject leads and our SEND coordinator.

Cross Curricular Links

Computing can make a distinctive contribution to many areas of the school curriculum. Each area of the curriculum can be enhanced through the inclusion of Computing. The use of Interactive Whiteboards in classrooms, wireless laptops and iPads which use Mirroring software to provide opportunities for teachers to enhance the delivery of their lessons using the medium of Computing.

The Role of the Headteacher

- To ensure Computing is taught within the school to statutory requirements.
- To be a promoter and facilitator of Computing within the school.
- To encourage and support a co-ordinated approach to Computing development, thus ensuring staff will use ICT confidently.
- To make available the necessary resources to continue the development of Computing within the school.
- To support the Computing subject leader in matters relating to the use and development of Computing across the curriculum.
- To recruit Computing literate staff when the opportunity arises.

- To work to achieve equal opportunities in the use of Computing throughout the school.

The Role of the Computing Subject Leader

- To promote Computing within the school.
- To ensure that Computing is implemented effectively within the classroom to statutory requirements.
- To act as a support and catalyst for change.
- To oversee the school computer network.
- To work with colleagues in the provision of support and guidance in all matters related to Computing.
- To arrange for relevant in-service training for the staff in accordance with the Staff Development Policy.
- To organise and review Computing resources and their relevance and usage.
- To ensure supplies of consumables are maintained.
- To help maintain the computers, liaising with external agencies when necessary.
- To review and introduce new software programs and hardware as the needs arise.
- To provide a good example of the use of Computing within the classroom.
- To encourage parental involvement in Computing.
- To ensure there is equality of opportunity in the use of Computing.

The Role of Teaching Staff

- To ensure that Computing is used effectively in the classroom to statutory requirements.
- With the support of the Headteacher and Computing subject leader to implement highlighted and discussed changes in the use of Computing.
- To ensure that there is equality of opportunity in the use of Computing in the classroom.
- To maintain the good condition of Computing equipment within the classroom and inform the ICT subject leader of any problems that may arise, recording on the Maintenance log as appropriate.

The Role of the Governing Body in the development of Computing

Through consultation with the Headteacher and the Computing subject leader the governors will have a full understanding of the implications of the extensive and

changing uses of Computing in the curriculum and the wider impact upon society. This will enable them to give the school their fullest support in all matters related to the implementation of Computing in the school.

Resources for the Implementation of the Computing Policy

The school has a policy of regularly assessing the needs of the curriculum and directing resources according to need. This is decided with consideration of the school's budget, planning policy and consultation between the Headteacher, senior management, curriculum subject leaders and all the teaching staff.

Funding for software is allocated from the school's budget and the major hardware will be updated, extended and improved as necessary and when funding is available. This has been further supplemented by our yearly fundraising activities which have allowed us to further increase the range of our provision.

The software we use in school is mainly content-free, i.e. word processing, spreadsheets, databases, music, control, interactive and graphic packages, thus giving a great wealth of use throughout the curriculum. When considering apps for use on the iPad, the functionality for purchasing apps is turned off and handled remotely, to ensure the safety of all pupils. Apps can be pushed out to individual devices and removed as required, and this is handled by our technicians at Sync and/or Mr Mclean in school as and when requested by staff.

Equally all children in KS1 now have access to iPads 1:1, which further enhances our provision within Computing and across all subjects.

With the rollout of one-to-one devices, Computing plays a much larger role in our everyday curriculum. This is reflected in all subjects and interventions, and as such staff have a crucial role to play in order to manage screen time, both for themselves and the children. Although there are no statuary guidelines, screen time should be carefully managed and monitored to ensure that devices are used appropriately and not as a holding or baby-sitting tool to ensure they are used as safely and efficiently as possible.

Health and Safety and ICT

When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils are taught:

- To recognise hazards, assess consequent risks and take steps to control the risks to themselves and others.
- To manage their environment to ensure the health and safety of themselves and others.
- To explain the steps they take to control risks.

The following are considerations that will be made when delivering Computing to children in the classroom in addition to those laid down in the school's Health and Safety Policy.

The Equipment

- The hardware needs to be placed on a work surface in a secure manner.
- The work surface needs to be an appropriate height, 600mm is recommended for primary schools.
- The monitor needs to be angled for comfortable viewing. When using iPads, this can be adjusted using the iPad case.
- Children will be provided with comfortable seating that is set at eye level with the screen to avoid neck strain.
- The children will be seated far enough away from the screen to avoid eyestrain.
- Brightness and contrast settings will be at a comfortable setting to avoid eyestrain.
- Roamers such as Beebots and Sphero's, will only be used in a suitable area, preferably where there is no through 'right of way' for other children.
- Devices will be checked regularly for faults, including annual PAT testing in accordance with current regulations.

The Location

- Windows with direct sunlight will have blinds fitted.
- Cables will be secured to ensure the safety of the operator.

The Children

- Children will be taught the correct procedure for logging onto and closing down the hardware.
- They will understand how to carry laptops and iPads safely and understand the need to keep them placed securely on the table when in use. When using iPads in a situation that requires them to be elevated, they will use two hands at all times.
- They will have regular breaks from the computer to avoid eyestrain.
- No food or drink will be taken near the computer or other electronic devices.
- Children will be taught good e-safety techniques, such as to never to disclose personal details to an unknown 3rd party, both in lesson and in our termly E-safety assemblies and inline with our E-Safety Policy.

In addition, to protect the school, all staff and families will have signed the "Acceptable Use Policy".

Staff Development in Computing

Staff requiring training, guidance in the implementation of the scheme of work, or needing advice about any aspect of the revised policy should contact the Computing subject leader.

Any members of staff who have attended INSET courses or training in any aspect of the Computing curriculum should also report to both the subject leader, and the Headteacher. After training has been completed, a "Course Attendance Form" should be filled in and a copy

given to the Headteacher. A short delivery to all staff may also be needed, so that information can be cascaded effectively.

In addition, a number of resources are saved to the school G-Drive which provide additional support in the use of iPads, and form the basis of our Staff training. These are updated when necessary.

Technical Support

Norman Street Primary School employs the shared use of a technical support provided by Gemini, who employ a technician to attend school every other week. Any technical faults concerning any machine will be recorded on the Maintenance log which can be accessed by all staff via the school server. This can then be passed on to Gemini during their fortnightly visit.

Similarly, a separate contract is in place with Sync, who support us with the use of iPads. A log is kept on the server that Sync can then access to deal with issues on their monthly visit. Immediate problems can be dealt with through Jamf, which allows all the iPads to be managed remotely and prevents misuse by either staff or children.

Home Learning (See also, "Remote Learning Policy")

In a situation where School devices are taken home, all children and families will be required to sign and return our Acceptable Use Policy, which covers basic rules for how we expect them to be used.

Only iPads will be allowed to be taken home as they have robust safety and monitoring features which ensure they can be used as safely as possible. Through the use of Jamf, we are able to remotely control and monitor iPads to ensure all apps are approved by a member of staff, and certain features can be turned off to ensure they are used appropriately, i.e FaceTime.

Furthermore, as well as using using Cumbria ICT Firewall, iPads have additional security features that allow us to further ensure that children cannot access websites that are inappropriate. These websites can be added to a "Blacklist" that ensures they cannot be accessed, even when off the school site and associated with another wi-fi network. This is to ensure that all children are protected, and unable to access inappropriate content or social media platforms that might encourage misuse.

Likewise, the ability to purchase apps is also turned off, with school iPads not having access to the App store to prevent misuse.

In terms of Home Learning, children can access work from their class teacher via Showbie. This app requires a login, and pupils have their own username and password. Children can chat with each other and the teacher, and this chat is monitored at all times by the class

teacher and can be turned off if required. Work posted to Showbie will be marked in line with the school marking policy.

When using additional software, teachers will first seek approval from Mr McLean who can purchase and push out the app to the relevant devices remotely. Teachers will continue to monitor usage alongside parents at home who will have all signed the Acceptable Use Policy.

If teachers choose to use video conferencing software with their class to facilitate learning, such as Zoom, these chats must be supervised at all times. Furthermore, participants will require a password to access the chat and teacher approval before they can join. Passwords are changed regularly. This ensures that all children are protected and have appropriate usernames on joining. Teachers will ensure that all safety features are turned on, including preventing children from sharing the screen with others. In addition, all Zoom calls are now recorded for Safeguarding reasons, and teachers are required to monitor those children that cannot be recorded. The Zoom recordings are saved securely on the cloud, and accessed by teachers using a secure website and password.

Should an iPad be lost, we are able to lock the device and place it in lost mode which allows us to track its location. This feature will also be used should an iPad be used in a way that is deemed in violation of our Acceptable Use Policy or Remote Learning Policy.

Volunteers

Norman Street Primary School welcomes the help of non-teaching volunteer helpers to assist children in their development of IT skills. These helpers will oversee the work of no more than six children at a time. Regular volunteers must be CRB cleared. Occasional volunteers should never be out of sight of the class teacher.

The teacher of those children will be responsible for the focus of the lesson, and will instruct the helper on guidance for the children.

Review of the Computing Policy

The staff and governors of Norman Street Primary School have agreed this policy. It is intended as a working document, which will be constantly evaluated and reviewed as part of the school's curriculum policy review cycle.

This policy was updated April 2023

This policy needs to be reviewed by **April 2024**