Grove Vale Primary School

Computing Policy

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**Mission Statement linking to Computing**

At Grove Vale, we strive to provide a welcoming, nurturing and caring environment where our pupils can flourish and exceed their potential in all aspects of their development, our motto devised by a pupil is Together We Grow. We encourage pupils to use our core values and drivers (be ambitious, be curious, be resilient, be creative, be kind and be proud), which underpin our school ethos and teaching and learning. Our values aim to expand our pupils’ minds, developing confident, resilient and articulate learners ready for life in the diverse and ever-changing technological world we live in. We aim to provide a foundation for our pupils to value each other and our community, respecting the rights of each other in both the real world and the digital. We ensure that our welcoming, secure and visually stimulating environment supports our staff and pupils to promote a love of learning every day. We grow together with grace, valour, pride, success empowering our ambitious pupils to strive to be the very best they can be in partnership with parents, governors and the community, leaving a positive footprint virtually and physically.

**Introduction**

The use of information and communication technology is an integral part of the National Curriculum and is a key skill for everyday life. A high-quality computing education and curriculum equips pupils to use and apply computational thinking and creativity in order to understand and change the world. 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 curriculum allows deep links with a range of subjects (Maths, Science, English and Art to name a few), which offer opportunities to further develop and consolidate knowledge, understanding and skills in these areas. In addition to this it provides insight into both artificial and natural systems. Computer science aims to teach the principles of information and computation, how digital systems work and how to apply knowledge through programming. By building on their learning, pupils are equipped to use information technology to create programs, systems and a range of content. In order to be able to teach and learn effectively, 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 to reach their full potential. The purpose of this policy is to state how the School intends to make this provision. Computing also ensures that pupils 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. In addition to this, it aims to support children to be positive, discerning, effective and successful digital citizens through the teaching and learning of online safety, which we embed throughout our school curriculum and effective provision.

**Aims of the Teaching of Computing**

The School’s aims are to:

* To provide a relevant, challenging and enjoyable curriculum for ICT and computing for all pupils in all year groups.
* To support all children in using a range of technology with purpose and enjoyment.
* To meet and build on the requirements of the National Curriculum Programmes of Study for Computing (ICT) and Online Safety.
* To help all children develop underlying skills and capabilities, which are essential to developing Computing capability in order to apply them elsewhere. For example: problem solving, perseverance, resilience and reflection leading to adaptations.
* To use ICT and Computing as a tool to further enhance learning throughout the curriculum.
* To respond to new developments in technology;
* To equip pupils with the confidence and capability to use ICT and Computing independently, outside of school and in later life.
* To develop the understanding of how to use ICT and Computing safely and responsibly.
* To teach and develop skills, learning and enjoyment that can be partnered and enhanced beyond school.

**Aims of the National Curriculum in reference to 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.

**Resource provision**

The School acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible pc system by investing in resources that will effectively deliver the strands of the National Curriculum and support the use of computing across the School. Teachers are required to inform the Computing Subject Leader of any faults as soon as they are noticed. A service level agreement is in place to help support the Subject Leader to fulfil this role both in hardware & audio visual.

ICT and computing network infrastructure and equipment has been sited so that:

* All classrooms contain an interactive whiteboard to enhance the teaching and learning in all lessons across the curriculum;
* Each class have access to ipads via a class ipad or from the school’s ipad bank
* A number of ipads are located in the Early Years Foundation Stage that are used to assess and support the pupils using Tapestry.
* Access to Echo Dots.
* Phase Devices e.g Chrome Books
* In addition to this, there is a variety of other ICT equipment in School to support the children in accessing the curriculum. A variety of software is available for supporting lessons across the curriculum. All software is recommended by the LA is used in School. Pupils also have access to resources online to cover all aspects of the curriculum. These resources are monitored and used under the guidance and supervision of the class teacher.

To ensure that copyright laws and virus protection procedures are adhered to staff, pupils and parents are not permitted to run software brought in from outside School on School machines. One drive is also used as cloud storage to eliminate the use of USB drives for storage to protect our systems from viruses and uphold GDPR procedures. The School has a Computing technician who visits school one afternoon ever week. Nominated governors and the Chair (L MacCarthy) take a particular interest in ICT, Computing and Online Safety in School.

**Teaching and Learning Objectives**

**Early Years Foundation Stage:**

* It is important in the Early Years Foundation Stage to give children a broad, play-based experience of Computing and online safety in a range of contexts, including outdoor play. Computing and ICT is not just about the use of computers.
* Early Years learning environments should feature Computing, technology and online safety scenarios based on experience in the real world, such as in role-play.
* Children gain confidence, control and language skills through a number of opportunities such as to ‘paint’ on the whiteboard or remote control cars for example.
* 2 Simple Infant Video tool kit which includes paint, data handling and a publisher.
* Outdoor exploration is an important aspect, supported by technology and devices. For example: toys such as walkie-talkie mobile phones sets.
* Recording devices (talking tins, postcards and recordable microphones) can support children to develop their communication skills. This is especially useful for children who have English as an additional language.
* Begin to develop knowledge and skills that will be built on during KS1 and KS2.

**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.

-Create write and debug (test) simple programs

-Use logical reasoning to predict the behaviour of simple programs in computing.

-Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

-Recognise common uses to technology beyond school.

-Organise, store, manipulate and retrieve data in a range of digital formats.

-Use technology and communicate safely and respectfully online, 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 technologies.

-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.

**By the end of 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.

**Entitlement to Computing Curriculum**

An adult must supervise children when they are accessing information from the Internet and online safety discussions and advice should be shared within any lesson involving the use of technology and the internet. It should also be discussed regularly between children and staff at SMT meetings and during briefings. Our service provider filters information and reports are sent securely through email. All staff are responsible for ensuring children are consistently reminded and aware of the risks and threats online and how to deal with any issues if they were to arise. Teachers plan to use websites, resources and online content such as videos, which are checked prior to the lesson to ensure they are suitable. YouTube is also blocked for children in school and only accessible by a member of staff.

**Cross curricular links**

As a staff, we aim to use ICT and computing resources and devices to enhance teaching and learning within every subject, particularly within Core and Foundation Subjects. Where appropriate, ICT and Computing should be incorporated into schemes of work for all subjects. Using computing cross circularly, should provide children with an opportunity to embed and further develop their skills. Using a range of resources linking to both Computing and Online Safety such as Purple Mash, Education For A Connected World, Rising Stars, Project Evolve, etc teachers plan lessons, computing activities and opportunities for learning that meet requirements of the National Curriculum, have the ability to link closely to topics in order to further consolidate learning, deepen children’s knowledge within the subject area and are engaging.

**Assessment and record keeping**

Teachers regularly assess capability through observations and by looking at and assessing completed work. Key objectives to be assessed are taken from the National Curriculum to Assess Key ICT and Computing Skills and run in line with the school curriculum referencing resources such as Purple Mash, Education For A Connected World, etc. Assessing Computing is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and Computing. 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 for 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 level. 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 have met, exceeded or not achieved the learning objectives.

We assess the children’s work in Computing by in-lesson observations and by assessing work at the end of the lesson. We assess children based on the success criteria and the key skills, knowledge needed to be successful during the lesson. In addition to verbal and marked teacher feedback, we provide children opportunities to provide verbal and written feedback to themselves or their peers via peer and self-assessment. Computing work is saved online or in children’s computing folder, which allows children to work both “plugged” and “un-plugged” throughout the year.

**Monitoring and Evaluation**

The Subject Leader and SLT are responsible for monitoring the standard of the children’s work and the quality of teaching. This may be through lesson observations, work scrutiny, pupil conferencing or looking at other data for the subject. The Subject Leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the School. We allocate special time for the vital task of reviewing samples of children’s work and for visiting classes to observe teaching in the subject.

**Staff Training**

* The Computing Subject Leader will provides and address staff training needs as part of the annual subject action plan, staff requests or issues that are needed to be addressed at a specific point in time.
* Additional opportunities are provided throughout the year to support individuals or groups with in any areas of teaching and learning that may require extra support.
* Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the Subject Leader.
* Resources such as Purple Mash provide valuable CPD through “Mini Mash Chats”, which staff are encouraged to use to support them with their own CPD, delivery of units and to enhance teaching and learning of children. Additional resources such as this can also support staff to consider how they could best deliver their units and adapt ideas and planning to better suit their children or to link to specific curriculum areas/topics.
* Teachers will be encouraged to use ICT and Computing to produce plans, reports, communications and teaching resources.
* SLT attend courses and CPD from a range of Computing and Online providers in order to ensure computing and online safety maintain up to date and to a high standard. Other organisations are often used to support children’s learning within school and staff CPD.
* Additional support from the authority has been used frequently throughout the year to help develop our curriculum and to support online safety and computing needs in school. For example: meetings along with our online safety champions or to develop parent knowledge during workshops.

**Pupils with special educational needs and Disabilities (see also SEND Policy)**

We believe that all children have the right to access ICT and Computing. In order to ensure that children with SEND achieve to the best of their ability, it may be necessary to adapt the delivery of the Computing Curriculum for some pupils where necessary to meet the needs to all learners. We teach Computing and Online Safety to all children and all ability levels. Computing forms part of the National Curriculum to provide a broad and balanced education for all children.

Through the teaching of Computing we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child’s different needs. Where appropriate Computing can be used to support SEND children on a one to one basis where children receive additional support.

**Security**

* The Computing technician and Subject Leader will be responsible for regularly updating anti-virus software.
* Use of ICT and Computing will be in line with the School’s ‘Acceptable Use Policy’. All staff, volunteers and children must sign a copy of the School’s AUP.
* Parents will be made aware of the ‘Acceptable Use Policy’ on admission and it is looked at yearly.
* All pupils and parents will be aware of the School Rules for Responsible Use of technology, Computing and the Internet and will understand the consequence of any misuse.
* The agreed Rules for Safe and Responsible Use of ICT, Computing and the Internet will be displayed in all ICT and computing areas.
* Online Safety sessions take place within computing lessons, during daily discussions, via newsletters and assemblies (find more in the online safety policy).
* Staff are all aware of up to date knowledge and participate in annual training on online safety and safeguarding, which is recapped frequently throughout the year.
* As mentioned previously, filtering and monitoring is reviewed and checked daily.
* CPOMS is used to report any issues regarding misuse of technology or online safety issues linking to safeguarding.

**Parental involvement**

Parents are encouraged to support the implementation of Computing where possible by encouraging use of ICT and computing skills at home during home-learning tasks and through the school website. They will be made aware of online Safety via newsletters, school workshops, etc. They are encouraged to promote online safety rules and support children to continually develop and show a positive digital footprint. They are also encouraged to discuss with their child topics linking to online safety and computing with their child. This may link to topics discussed in school or challenged set by our online safety champions. Information is also updated on our current section of online safety on the school website.

Approved on

Governor’s signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_