

# Computing Policy



**The Grange Primary School**

**July 2016**  
**Review date: Autumn 2019**

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## 1. Introduction

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. At The Grange 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.

The purpose of this policy is to state how the school intends to make this provision, principles and strategies for the teaching and learning of ICT at The Grange Primary School.

It has been developed through a process of consultation with school staff and governors.

Please note that this policy is to be read in conjunction with the following policies:

- E-safety (safeguarding children and adults in a digital world)
- Safeguarding & Child Protection
- Behaviour
- Anti-bullying

## 2. Vision

At The Grange Primary School our vision is to harness 21<sup>st</sup> century technology to provide a 21<sup>st</sup> Century education.

ICT is changing the lives of everyone. Through teaching ICT we equip children to participate in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. ICT skills are a major factor in enabling children to be confident, creative and independent learners in all areas of learning and life. We are committed to using ICT effectively and safely in all areas of management of the learning environment eg, to enhance teaching, for efficient record keeping and assessment.

Effective ICT learning takes place in authentic cross-curricular contexts. That is not to say that ICT should necessarily be taught within other subjects though; there is still a place for discrete ICT lessons, intended solely to develop ICT capability, but where the learning is contextualised in a cross-curricular theme.

## 3. Aims

The schools aims are:

- Provide a relevant, challenging and enjoyable curriculum for ICT and computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for ICT and computing.
- Use ICT and 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 ICT and computing throughout their later life.
- To enhance learning in other areas of the curriculum using ICT and computing.
- To develop the understanding of how to use ICT and computing 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.

#### **4. Rationale**

The school believes that ICT and 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.

#### **5. Objectives**

##### **Objectives Early years**

It is important in the foundation stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Early years learning environments should feature ICT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy. Outdoor exploration is an important aspect, supported by ICT toys 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

## **6. Resources and Access**

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 ICT and computing across the school. Teachers are required to inform the ICT and computing coordinator of any faults as soon as they are noticed. Resources if not classroom based are located in the ICT and computing suite. A service level agreement with Osborne Technologies is currently in place to help support the coordinator to fulfill this role both in hardware & audio visual. ICT and computing network infrastructure and equipment has been sited so that:

- Every classroom from nursery to y6 has a Gigabyte Brix connected to the school network and to the interactive board running Tango, an interactive whiteboard, Pentaclass sound systems and video facilities. Each teacher is allocated a school laptop and class ipad. Every classroom in KS1 has a set of ipads.
- There is an ICT and computing suite of 23 laptops, 17 macbooks, a set of ipads that can be booked out for class use and video conferencing equipment that can be booked via the IT co-ordinator.
- There are 2 laptop trolleys in school containing 19 Samsung netbooks and 9 Asus netbooks with internet access available to use in classrooms.

- Each class from y3 – y6 has an allocated slot in an afternoon for teaching of specific ICT and computing skills.
- The ICT and computing suite and netbooks are available for use throughout the school day as part of ICT and computing lessons and for cross curricular use when not in use by the IT instructor.
- Pupils may use ICT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has an ICT and computing technician who is in school one day a week.
- A governor will be invited to take a particular interest in ICT and computing in the school.

## 7. ICT across the curriculum

Although the ICT curriculum is organised as a discrete subject, there are many potential cross-curricular activities.

Making links between areas of learning deepens children’s understanding by providing opportunities to reinforce and enhance learning. Where appropriate, ICT and computing should be incorporated into schemes of work for all subjects. ICT and computing should be used to support learning in other subjects as well as develop ICT and computing skills.

Learning is enhanced by:

- Giving further opportunities to practise taught skills through purposeful use in other curriculum areas;
- Providing real experiences, context and meaning for the development of core skills;
- Assisting memory through providing opportunities for children to use skills in a different context;
- Providing opportunities for the application of knowledge in new contexts, to involve children in higher order thinking skills, such as reasoning and problem solving.

## 8. Planning

As the school develops its resources and expertise to deliver the ICT and computing curriculum, modules will be planned in line with the national curriculum and will allow for clear progression. Modules will be designed to enable pupils to achieve stated objectives. Pupil progress towards these objectives will be recorded by IT instructor. Staff will follow medium term plans with objectives set out in the national curriculum and use the weekly running sheet (no formal weekly planning is done) These daily plans list the specific learning objectives for each lesson. A minority of children will have particular Computing and ICT Policy 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 line with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure appropriate provisions or interventions are put into place.

The school uses the International Primary Curriculum and Rising Stars scheme of work to deliver computing. The ICT subject leader works in conjunction with the class teachers in each year group to cover the topic work. Children also study ICT as part of their work in other subject areas.

We recognise that all classes have children with widely differing ICT abilities. This is especially true when some children have access to ICT equipment at home and others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways.

- Setting common tasks which are open ended and can have a variety of responses.
- Setting tasks of increasing difficulty (not all children will complete these tasks).
- Grouping Children by ability in the room and setting different tasks for each ability group.
- Providing resources of different complexity that are matched to the ability of the child.
- Using Teaching assistants to support the work of individual children or groups of children.

Teaching Assistants : support learning in ICT by:

- giving focused support to individuals and small groups
- supporting differentiation within the classroom
- supporting assessment  
using specific software/programs to support learning

## **9. Assessment and record keeping**

At The Grange Primary school assessment is an integral part of the teaching process. Assessment is used to inform planning and to facilitate differentiation. The assessment of children's work is on-going to ensure that understanding is being achieved and that progress is being made. 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 ICT and computing skills each term. Assessing ICT and computing work 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 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 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 ICT and computing by making informal judgments as we observe the children during lessons. We mark each piece of work against the lesson objective- following the marking policy.

Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit. We record the results in our assessment files and we use these to plan future work, to provide the basis for assessing the progress of the. ICT and computing 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 and examples of children's work on the server.

## **10. 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, book trawl of 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.

**11. Pupils with special educational needs** (see also SEN policy)

We believe that all children have the right to access ICT 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 ICT Computing and ICT Policy and computing curriculum for some pupils. We teach ICT and computing to all children, whatever their ability. ICT and computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of ICT and 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 ICT and computing can be used to support SEN children on a one to one basis where children receive additional support. Additionally as part of our dyslexia friendly approach to teaching and learning we will use adapted resources wherever possible such as visual timetables, different coloured backgrounds and screen printouts

**12. Equal opportunities** (see also equal opportunities policy)

The Grange Primary School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, and 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 ICT and 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. We conduct regular surveys of children to ascertain who has a PC and internet access at home. Those without these can access the required technology during the school day.

**13. Children who are gifted and talented**

Children who are working well above the overall level of the class will be given a range of experiences designed to broaden or deepen their learning while working on the same learning objectives as their peers. This may be done by providing more demanding activities or investigations, often with a more open-ended approach. From time to time they may also be accelerating the pace of their learning by working towards objectives chosen from the relevant progression strand from a later year.

**14. The role of the co-ordinator**

- There is an ICT and computing coordinator who is responsible for producing an ICT and computing development plan and for the implementation of the ICT and computing policy across the school along with the head teacher and SLT.
- To offer help and support to all members of staff (including learning assistants) in their teaching,
- To maintain resources and advise staff on the use of materials, equipment and books.
- To monitor classroom teaching or planning following the schools rolling programme of monitoring.
- To monitor the children's computing work, looking at samples of different abilities.
- To lead staff training on new initiatives.
- To attend appropriate in-service training and keep staff up to date with relevant information and

developments.

- To have enthusiasm for computing and encourage staff to share this enthusiasm.
- To keep parents and governors informed on the implementation of computing in the school.
- To liaise with all members of staff on how to reach and improve on agreed targets
- To help staff to use assessment to inform future planning

#### **15. The role of the class teacher**

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning ICT and computing skills and using ICT and computing across the curriculum through the International Primary Curriculum

- To plan and deliver the requirements of the EYFS outcomes and early learning goals or primary framework for computing to the best of their ability. At the Grange Primary School we set high expectations for our pupils and provide opportunities for all pupils 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 ensures success by creating effective learning environments.

- Securing their motivation and concentration
- Providing equality of opportunity through teaching approaches.
- Using appropriate assessment approaches
- Setting suitable targets for learning as outlined in the inclusion policy.
- 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.
- To keep up to date assessment records (see policy document).

#### **16. Staff training**

- the ICT and computing coordinator 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 coordinator.
- teachers will be encouraged to use ICT and computing to produce plans, reports, communications and teaching resources.

#### **17. Health and safety** (see also health and safety policy)

The school is aware of the health and safety issues involved in children's use of ICT and computing. All fixed electrical appliances in school are tested by an LA 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, then the equipment must be pat tested before being used in school. This also applies to any equipment brought in to school by, for example, people 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 the caretaker, business manager or head teacher who will arrange for repair or disposal.

- 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 & AUP

**18. Security**

- The ICT and computing technician /coordinator 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 schools AUP. • Parents will be made aware of the ‘acceptable use policy’ at school entry and ks2.
- All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.
- The agreed rules for safe and responsible use of ICT and computing and the internet will be displayed in all ICT and computing areas.

**19. Parental involvement**

Parents are encouraged to support the implementation of ICT and 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 e-safety and encouraged to promote this at home.

**20. Policy monitoring and review**

The ICT co-ordinator is responsible for the monitoring of the implementation of this policy. The co-ordinator reports on the effectiveness of the policy to the Head and/or Deputy and the governing body curriculum committee which reports to the full governing body. There is a designated ICT governor who meets with the coordinator to reviews progress in ICT.

The policy will be reviewed every three years.

Deb Bibby  
ICT Coordinator  
July 2016

ICT co-ordinator                      Signed \_\_\_\_\_                      Date \_\_\_\_\_

Head Teacher                      Signed \_\_\_\_\_                      Date \_\_\_\_\_

Governing Body                      Signed \_\_\_\_\_                      Date \_\_\_\_\_