



## Computing Policy

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## **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.

In the Acorn Federation 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.

## **Aims**

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

## **Rationale**

The federation believes that IT 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 to focus and concentrate.
- Offers potential for effective group working.
- Has the flexibility to meet the individual needs and abilities of each pupil.

## **Objectives**

### **Early years**

It is important in the foundation stage to give children a broad, play-based experience of IT in a range of contexts, including outdoor play. IT is not just about computers. Early years develop fine motor, co-ordination and language skills through opportunities to 'paint' on the whiteboard or programme a toy.

Recording devices are also an effective tool for children to develop their communication skills. This is particularly useful for SEN children or children who have English as an additional language.

### **Key Stage 1**

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.

### **Key Stage 2**

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 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.

### **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 IT and computing across the school.

To ensure IT can be delivered across the whole school, every classroom currently has access to the following set of IT equipment:

- A Teacher Laptop
- An Interactive whiteboard with separate sound bar
- A class set of laptops
- Programmable devices

Specific IT and computing skills are taught as and when required and children are given opportunities to apply these skills with our creative curriculum.

Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.

A governor will be invited to take a particular interest in IT and computing in the school.

## **Planning**

All teachers will follow the STEM Computing scheme; long term, medium term and short term plans are readily available with supporting materials (such as teaching slides, videos, resources and assessment tools). Computing will be taught discreetly once a week in every class Year 1 – Year 6.

## **Assessment and Record Keeping (also see Assessment Policy)**

The following strategies are in place:

- The programmes of work identify clear opportunities for the monitoring and record keeping of pupils' progress.
- A clear recording mechanism.
- Programmes of work include related tasks that assist the teacher to assess the pupils' progress and attainment in Computing.
- Differentiated assessment for pupils with high levels of Computing capability, or special needs.
- Progress in Computing will be reported at least once a year and information about the use of ITs within the wider curriculum will inform the annual assessment.

## **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 scrutiny, pupil voice and staff voice. 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.

## **Pupils with Special Educational Needs (see also SEN policy)**

We believe that 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 IT and computing curriculum for some pupils. We teach IT and computing to all children, whatever their ability. IT and computing forms part of the National Curriculum to provide a broad and balanced education for all children. Through the teaching of IT 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 IT and computing can be used to support SEN children on a one to one basis where children receive additional support.

## **Equal Opportunities (see also Equal Opportunities Policy)**

The Acorn Federation will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to IT 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.

## **The role of the co-ordinator**

- The Computing Coordinator is responsible for producing an IT and computing development plan implementing the IT and computing policy across the school.
- To offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- 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 lead staff training on new initiatives.
- Share management of IT budget
- To attend appropriate in-service training and keep staff up to date with relevant information and developments.
- To have a passion for computing and encourage staff to share this enthusiasm.
- To keep parents and governors informed on the implementation of IT in the school.
- To liaise with all members of staff on how to reach and improve on agreed targets.
- To help staff use assessment to inform future planning.

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

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning IT and computing skills and using IT and computing across the curriculum.

### **Class teachers will:**

- Plan and deliver the requirements for IT to the best of their ability. In the Acorn Federation we set high expectations for our pupils and provide opportunities for all pupils to achieve, including 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.
- Follow the STEM Computing scheme for year group; adapt where possible to suit the needs of all pupils.
- Provide equality of opportunity through teaching approaches.
- Use effective assessment tools to check pupils' understanding.
- Provide a stimulating and engaging learning environment to motivate pupils.

The class teacher's role is a vital role in the development of IT throughout the school and will ensure continued progression in learning and understanding.

### **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 IT and computing. All fixed electrical appliances in school are tested by a 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 IT Technician 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

### **Inclusion**

In the Acorn Federation we plan to provide for all pupils to achieve, including boys and girls, higher achieving pupils, gifted and talented pupils, those with SEN, pupils with disabilities, pupils from all

social and cultural backgrounds, children who are in care and those subject to safeguarding, pupils from different ethnic groups and those from diverse linguistic backgrounds.

### **Monitoring and review**

The Head teacher and Computing Subject Leader will monitor the effectiveness of this policy on a regular basis. The Head teacher and Computing Subject Leader will report to the governing body on the effectiveness of the policy annually and, if necessary, makes recommendations for further improvements.