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| Created       | September 2016 |
| Last Reviewed | September 2019 |

**This policy is part of the School's Statutory Safeguarding Policy and in conjunction with the Keeping Children Safe in Education Document (2019). Any issues and concerns with online safety must follow the school's safeguarding and child protection processes.**

## **Computing Policy**

### **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. 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.

### **Aims**

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

## **Objectives**

### **Early Years Foundation Stage**

It is important in the foundation stage to give children a broad, play-based experience of computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature computing scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. This is particularly 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 are executed 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.

## **Resources and access**

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of computing across the school. Resources, if not classroom based, are located in the computer areas or stored away by the technician.

## **Planning**

The school plans all lessons in accordance with the new Computing National Curriculum. 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 will 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.

## **Assessment and record keeping**

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 computing skills each term. Assessing computing work is an integral part of teaching and learning and central to good practice. 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 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. 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.

Computing work is saved on the school network and on to the LGFL learning platform when required.

## **Monitoring and evaluation**

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching. 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. The governors will ensure this policy is reviewed.

## **Equal opportunities**

We will ensure that all children are provided with the same learning opportunities whatever their 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 computing and all staff members follow the equal opportunities policy.

### **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 technology 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.
- Damaged equipment should be reported to the technician or business manager who will arrange for repair or disposal.
- Trailing leads should be made safe behind the equipment
- Liquids must not be taken near the computers
- Online safety forms an integral part of the curriculum and the school will deliver further education through assemblies and parent presentations.

### **Security**

- The I.T Manager / Computing Learning Lead will be responsible for regularly updating anti-virus and other protective software.
- Use of technology 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 and children are required to sign the 'acceptable use policy' at school entry.