



## **Computing Policy**

### **Rationale**

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. 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. Computers are the most obvious tool used but computing also includes programmable robots, tape recorders, calculators, telephones, cameras, videos and other forms of media.

### **Aims and Objectives**

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.

### **Programmes of study**

#### **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.

### **Foundation Stage**

We aim to enable all children in the foundation stage to have access to a wide range of technological equipment. Some of this will be classroom resources such as computers, cameras and Beebots. All children will be taught the uses for a variety of equipment as set out in the early learning goals. Children in the foundation stage also have use of Hudles and iPads in which they can use age appropriate applications.

### **Inclusion**

All children will have access to using computer systems and/or iPads to enable them to gain skills of the curriculum.

### **Curriculum Organisation**

Computing should be taught on a weekly basis for no shorter than an hour. This lesson's aims should be taken from the programmes of study. Computing can be and should be used in other areas of the curriculum on a weekly basis.

### **Role of the Coordinator**

The coordinator is responsible for the whole school development of Computing ensuring there are progression of skills gained by all pupils. The coordinator is responsible for liaising with the IT technician and reporting problems and queries.

### **Assessment and Recording**

The class teacher is responsible for keeping a record of each pupil's computing experience.

Pupil achievement in Computing should be assessed regularly by:

- Listening and observing children working
- Discussions with children
- Questioning children to assess understanding and to encourage deeper understanding
- Observations of children using a wide variety of resources and confidence and ideas whilst using them

### **Monitoring**

The computing coordinator is responsible for monitoring the teaching and progression of skills throughout the school. Termly monitoring will take place to capture the teaching of key skills set out in the National Curriculum. Monitoring of computing will include; monitoring of planning, monitoring of record keeping by teachers, child interviews and staff questionnaires. It is the responsibility of the computing coordinator to monitor teachers' skills and knowledge of the computing curriculum and to support as necessary.

### **Health and Safety**

At Moat House we take health and safety while using technical equipment seriously. The IT technician will maintain electrical equipment within the school to ensure it has passed an electrical safety test. Class teachers are responsible for the correct use of any equipment used within classrooms. All staff are responsible for reporting any faulty equipment to the computing coordinator and the IT technician.

E-safety is classed as an integral part of the computing curriculum. Class teachers are responsible for monitoring the safe and appropriate use of pupils when using the internet on any device within the school. Any inappropriate use by pupils using the internet on any device should be reported to Phase Leaders and the Head Teacher.

### **Resources**

At Moat House Primary School we aim to provide opportunities to experience computing within classroom suites and resource area suites. All children have access to a computing suit on the first floor of the building. Each phase have access to a class set of iPads and have PCs in resource areas.

Each classroom is equipped with a desktop PC and links up to a Promethean interactive board. 3 resource areas also have a desktop PC connected to a Promethean interactive board.

It is the shared responsibility of the subject coordinators and the computing coordinator to keep up to date with identifying new items required. This should be discussed and reviewed after and before each terms scheme of work. Regular audits will be carried out by the IT technician and will be reported to the computing coordinator if any equipment needs replacing or ordering.

**Policy approved**

June 2018

**To be reviewed** Summer 2020