Oak Farm Junior School

Computing Policy

Policy formulated: September 2017
Review date: September 2018

**Person responsible: Computing Subject Leader
(Matt Szurgot)**

Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Oak Farm Junior School, we recognise that pupils are entitled to a broad and balanced computing education with a structured and progressive approach.

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; they are 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.

Aims

- Provide a broad, balanced, challenging and enjoyable curriculum for Computing 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 skills to use digital tools and technologies throughout their lives.
- 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 new 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.

<u>**Rationale**</u>

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.

<u>**Teaching and Learning**</u>

<u>**Objectives**</u>

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.

<u>**Resources**</u>

Oak Farm acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform of any faults on the ICT Helpdesk as soon as they are noticed. Resources if not classroom based are located in the computing suite. A service level agreement with Inspire ICT is currently in place to help support the subject leader and staff with hardware & software.

Computing network infrastructure and equipment has been sited so that:

- Every classroom has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- There is a computing suite with 31 desktops.
- There are 3 laptop trolleys with 15 laptops inside each of them.
- There is an iPad Sync & Charge cabinet in school containing 10 USB ports
- Internet access is available in all classrooms.
- Each class has an allocated slot one afternoon per week for teaching computing as a discrete subject and the laptop trolleys are available for additional use.
- The school has a computing technician who is in school 2 afternoons per week.
- The Twinkl scheme of work has been purchased to support all staff in the delivery of this new curriculum from September 2017.
- In addition to the above there is a variety of other ICT equipment in school including; Roamers, Flowols, Easi-Speak Microphones, digital cameras, visualisers and headphones.
- There is a variety of software is available for all machines.
- To ensure that copyright laws are adhered to, staff, pupils and parents are not permitted to run software brought in from outside school on school machines. An Online Safety policy has been developed in order to allow the safe and efficient use of the Internet for both staff and pupils in an educational context.
- Staff confidence and expertise will be developed if requested through training sessions provided by external agencies. Support will be given, where possible, with Computing planning and teaching by the Computing co-ordinator.

Planning

- The school is using the Twinkl computing scheme of work and the LGfL Resources for the majority of lessons.
- As the school develops its resources and expertise to deliver the computing curriculum, units will be planned in line with the national curriculum and will allow for clear progression. Units will be designed to enable pupils to achieve stated objectives. Pupil progress towards these objectives will be recorded by teachers as part of their class recording system. Staff will follow medium term plans with objectives set out in the national curriculum.
- We recognise that all classes have children with widely differing computing abilities. This is especially true when some children have access to equipment at home, while 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, by
-setting common tasks which are open-ended and can have a variety of responses.
-setting tasks of increasing difficulty (not all children complete all 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 classroom assistants to support the work of individual children or groups of children.

Assessment and record keeping

- On-going formative assessment is an integral part of good practice. Its main purpose is to enable the teacher to match work to the abilities and needs of the children and ensure progression in learning.
- Children are also assessed in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, a summary judgment may be made of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.
- Samples of work should be kept for groups of children on the school network within relevant class folders.

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, pupil discussion and evaluating pupil work.

The role of the Subject Leader

There is a computing subject leader who is responsible for the implementation of computing policy across the school. Their role is to:

- offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- provide colleagues opportunities to observe good practice in the teaching of computing.
- maintain resources and advise staff on the use of digital tools, technologies and resources.
- monitor classroom teaching or planning following the schools monitoring programme.
- monitor the children's progression in computing, looking at examples of work of different abilities.
- manage the computing budget.
- keep up-to-date with new technological developments and communicate information and developments with colleagues
- lead staff training on new initiatives.
- attend appropriate in-service training
- have enthusiasm for computing and encourage staff to share this enthusiasm.
- keep parents and governors informed on the implementation of computing in the school where necessary
- 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

Security

The computing technician will be responsible for regularly updating anti-virus software. The use of IT and computing will be in line with the school's 'acceptable use policy'. All pupils and parents will be aware of the school rules for responsible use of IT and computing and the internet and will understand the consequence of any misuse.

Matt Szurgot

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