

Langmoor Primary School – Computing Policy

This policy document sets out the school's aims, principles and strategies for the delivery of Computing within ICT. This policy deals only with the computing curriculum.

The new national curriculum for computing has been developed to equip young pupils with fundamental skills, knowledge and understanding that are essential in the 21st century. Our vision is for all staff members and pupils in our school to become confident users of modern technology in order to enhance teaching and learning.

At Langmoor, we recognise the importance of technology devices in both the society we live in and in the process of education. Young children use computing tools to explore, find, analyse, interpret, exchange and present information responsibly, creatively and with discrimination. They learn how to employ ICT in order to have rapid access to ideas and experiences from a wide range of sources. We aim to enhance these skills in our school.

Aims

At Langmoor, Pupils will:

- Understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Become responsible, competent, confident and creative users of information and communication technology.

We will work to achieve these aims by:

- Helping all children to use technology with purpose and enjoyment.
- Meeting the requirements of the National Curriculum as fully as possible and helping all children to achieve the highest possible standards of achievement.
- Aiding all children to develop the necessary skills to exploit ICT resources and tools.
- Guiding all children to become autonomous users of computing resources.
- Facilitating all children to consider the benefits of computing and its input on society.
- Ensuring pupils use and gain experience of computing in a variety of subject contexts.
- Developing staff skills to enable them to enhance and extend their pupil's learning.
- Assessing and monitoring pupil's progress to ensure continuity and progression.
- Providing and maintaining appropriate equipment and software.
- Celebrating success in the use of ICT.

The Curriculum

We believe that all children should have access to a broad, balanced, progressive and relevant curriculum.

In the new National Curriculum, computing has replaced ICT. This new subject addresses the challenges and opportunities offered by the technological rich world in which we live in today.

The core of computing is computer science, in this pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge into practise 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 enables children to 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.

Key stage 1 Pupils are 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 are 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.

At Langmoor, we recognise that ICT cannot (and should not) be just taught in isolation. The National Curriculum for ICT states:

"Pupils should be given opportunities, where appropriate, to develop and apply their ICT capability to their study of other National Curriculum subjects"

Staff are always seeking ways in which ICT can be used to develop and support the curriculum within other subjects.

Planning, teaching and differentiation:

To ensure continuity and progression, we provide guidance to staff on key ideas for using Computing in the curriculum. We ensure that pupils in each class have an entitlement to ICT. The framework provides an overview for each Key Stage. Teachers use units of work which are based on Switched on by Rising Stars. EYFS and Key Stage 1 teachers teach their own pupils. Key Stage 2 are taught by an ICT specialist.

Teaching staff and the ICT specialist differentiate their lessons in Computing by using visual, kinaesthetic and auditory teaching styles, varying the presentation of materials.

The computer can be used as a tool for differentiation because:

- It is infinitely patient and enables pupils to try things out, to take risks and build up confidence.
- Difficult concepts can be made visible and explored.
- Ideas can be developed and refined easily without having to start again.
- It provides pupils with access to a range of information and alternative resources.
- It can improve and enhance how work is presented and can develop pupil confidence and achievement.
- It can provide access to pupils with disabilities and enable them to communicate and contribute when previously they could not.

In addition, teachers use ICT to support subject work, e.g. mathematical 'games' to support numeracy skills, adventure games and talking books to support reading and writing. It should be noted that this software may not develop a pupil's ICT capability. Specific reference to their use should be made in appropriate half term plans.

Inclusion

At Langmoor, we encourage pupils with special educational needs to use the technology available in school to support their independence and develop their interests and abilities. All pupils have access to the use of Computing regardless of gender, race, cultural background or any physical or sensory disability. Pupils with learning difficulties are given greater access to the whole curriculum through the use of computer technology and extra support from learning support assistant.

Assessment, Recording and Reporting

Children complete a self-assessment sheet for each unit. This includes key skills learnt in each unit. Staff also have a list of key skills for each year group to ensure that these are covered. Staff can then use this information to feed into their end of year assessment sheets.

Examples of pupil's work are collected so a school portfolio of ICT work can be built up by the subject coordinator. This work is also moderated during staff meeting time at intervals throughout the school year.

Pupil's attainment in ICT will continue to be included on their annual report to parents.

Hardware and Software

For a list of the hardware currently in school and its location, please refer to the hardware audit. For a list of software available, please refer to the 'software audit' which is located in the Computer Suite.

Resources which have not been identified as 'class based' are located in the ICT suite which all members of staff has access to.

The ICT Suite includes a mixture of 31 computers/laptops. There are also 30 iPads which are located in the iPad cabinet at the front of the ICT suite, these are updated weekly by the school technician. In the filing cabinet are 1 digital video camera and various 'Tuff-cam' recorders. Each class has its own digital camera and a HD webcam which teachers can use as visualizers to enhance the view of practical demonstrations. All new pieces of equipment must be recorded by the co-ordinator on the inventory held by the office manager and on the Hardware Audit list held by the ICT co-ordinator.

Hardware Faults

The co-ordinator will liaise with the technician on a weekly basis. Any faults must be reported to the ICT co-ordinator first, and not directly to the technician. Any faults in the network must not be dealt with by staff, instead the ICT co-ordinator must be called straight away. If the technician is not available, then the ICT co-ordinator will attempt to solve the problem. For persistent problems the ICT co-ordinator will refer to the appropriate body.

Equal Opportunities

We operate within the school's equal opportunities policy. We challenge prejudice as it arises and have a consistent approach to dealing with racist or sexist incidents.

- All pupils should have equal access to ICT in order to develop their personal ICT capability.
- Groups are carefully selected by the teacher to meet the needs of the task.
- We check CD-ROM's and other software to ensure gender and ethnicity are reflected in a balanced way.
- All children should be encouraged, irrespective of gender. Teachers are aware that many girls are intimidated by the dominating attitude of boys and we therefore group pupils very carefully when pairing for activities.

Links with external agencies

We are currently looking at ways in which the facilities can be used by the wider community, outside school hours.

A shared ICT Technician is available to the school, they are employed by the OWL's trust. The Technician works to maintain the hardware in the school and is available one day a week.

Budget:

The budget is allocated by the school's governing body and many external factors influence the allocation. The ICT co-ordinator prioritises the ICT spending in line with the ICT development plan.

The role of the Co-ordinator

The ICT co-ordinator is responsible for:

- Co-ordinating the writing of the school's Computing policy.
- Ensuring the implementation of the policy.
- Ensuring continuity and progression within Computing throughout the school.
- Ensuring that class teachers undertake assessment and recording of each child's Computing capability and supporting staff in this.
- Organising resources to support the Computing scheme of work.
- Ensuring staff have easy access to resources.
- Co-ordinating the purchasing and maintenance of equipment.
- Identifying what ICT support is needed by individual staff.
- Assisting staff to incorporate ICT into their planning and lessons.
- Arranging (and delivering where appropriate) in-service support.
- Providing ideas and support where needed.
- Monitoring and reviewing Computing practice and provision throughout the school.
- Ensuring that they themselves keep up to date on the use of ICT in the curriculum.

- Liaison with LEA advisory staff, ICT companies and manufacturers and other agencies.
- Liaison with other schools concerning ICT/Computing.
- Liaison with and line management of the IT technician.

Professional development

We believe that ICT is a basic core skill for teachers to have, so that they can develop pupils' ICT capability. We will ensure that all members of teaching staff have an understanding of the national curriculum orders for ICT/Computing, have had training on how to use the internet, and are confident and competent in delivering the core ICT-rich units of work outlined in the scheme of work. All staff have completed their VLE training and this is an ongoing development for both staff and pupils.

Using ICT to support Literacy and Numeracy

We believe that ICT provides a key medium for developing literacy and numeracy skills. If pupils work successfully with word processors, desktop publishing software, databases, spreadsheets, CD-Rom, the Internet, control and data logging equipment, they need to have a range of literacy skills by the end of key stage 2. These include:

- The ability to express themselves clearly in standard and written English
- The ability to apply their knowledge of spelling
- The ability to re-draft their writing
- The ability to think about and engage the reader (consider the audience)
- The ability to consider who has written or produced an article, story or poem etc.
- The ability to locate information using simple techniques, such as the alphabet, visual clues, common formats or categorising information
- The ability to read for meaning using various skills such as scanning for key words, skim read for relevance, identify key points/ideas
- The ability to retrieve, extract and collate information
- The ability to summarise information
- Knowledge and use of key words

Pupils also need a range of numeracy skills. These include:

- The ability to understand the language associated with data handling
- The ability to 'talk about' mathematical problems or data handling work
- The ability to collect, record and enter data
- The ability to categorise data into sensible groups
- The ability to formulate questions, including the use of mathematical language
- The ability to work with basic statistical functions, such as sum, mean, simple formulae
- The ability to ask 'what if...?' type questions
- The ability to analyse data
- The ability to draw conclusions from data
- The ability to interpret standard charts, diagrams and tables

- The ability to interpret and use basic statistical functions such as mean, median, mode
- The ability to present information to others using charts, graphs, diagrams or tables
- The ability to work with large data, including real data, or information sets
- The ability to question whether data is plausible or reliable and recognise that poor quality information yields unreliable results

All the above skills must be taught. These can be taught within the Literacy Hour and Numeracy Hour and support by the use of ICT.

Appendices:

Please find attached the Internet Acceptable Use Policy and the Internet Permission Letter that all children need to have returned to the school.

Updated and reviewed September 2016
To be reviewed again in September 2019