



CUMNOR CE PRIMARY SCHOOL

COMPUTING POLICY

Agreed by Governors:

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V. CARR (Chair of Govs)

E. READ (Headteacher)

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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. At Cumnor, 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 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 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.

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

It is important to give Reception 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 'paint' on the whiteboard or program a toy. Recording devices can support children to develop their communication skills.

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 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.

Planning

The school's long term plan allows for clear progression in each strand of the national curriculum. We recognise that all classes have children with widely differing computing abilities. 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.

Inclusion

At Cumnor, we plan to provide for all pupils to achieve, including boys and girls, higher achieving 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.

Resources and access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible computer system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of computing across the school. A service level agreement with 123ICT is currently in place to help support the school to fulfil this role both in hardware and audio-visual.

- A computing network infrastructure and equipment has been installed;
- Every classroom from reception to y6 has Wi-Fi access connected to the school network and an interactive whiteboard with sound, DVD and video facilities;
- There are iPad Sync & Charge cabinets in school containing 32 iPads in order to allow all pupils in a class to work individually as well as collaboratively. Reception also has a bank of 5 iPads, and one additional iPad is kept in each of the classes;
- There are two trolleys containing a total of 32 laptops and Chromebooks:
- The laptops, Chromebooks and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use;
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher;
- The school has a computing technician who is in school each week;
- A governor is responsible for taking a particular interest in computing in the school.

Software

Software is regularly audited and ensures staff has the necessary tools in order to deliver the national curriculum effectively.

Cross Curricular Links

Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links in closely with work in art, and work using databases supports work in maths, while the Internet proves very useful for

research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way.

English - ICT is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They learn how to improve the presentation of their work by using desk-top publishing software.

Maths - Many ICT activities build upon the mathematical skills of the children. Children use computing in mathematics to collect data, make predictions, analyse results, and present information graphically. They acquire measuring techniques involving positive and negative numbers, and including decimal places. They also use web based maths programs such as 'my maths', 'nrich', maths apps and games.

SMSC and Citizenship - Computing makes a contribution to the teaching of SMCS and citizenship as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet and email. Through the discussion of moral issues related to electronic communication, children develop a view about its use and misuse, and they also gain a knowledge and understanding of the interdependence of people around the world.

Health and Safety and Safeguarding

The school is aware of the health and safety issues involved in children's use of computing. All electrical appliances in school are tested accordingly. 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 ICT technician, who will arrange for repair or disposal.

Monitoring and Reviewing

The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the subject leader. The subject leader is also responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.

Security

- The ICT and Computing technician will be responsible for regularly updating anti-virus software.
- Use of computing will be in line with the school's 'Acceptable Use Policy'. All staff, volunteers and children must agree to the schools Acceptable Use Policy.
- All pupils and parents will be aware of the school rules for responsible use of computing and the Internet and will understand the consequence of any misuse.