

Blanford Mere Nursery & Primary School



Computing Policy

Date adopted by governors
April 2021
To be reviewed
April 2024

COMPUTING POLICY

Article 17: *Every child has the right to reliable information from the media. This should be information that children can understand. Governments must help protect children from materials that could harm them.*

WHAT IS COMPUTING?

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, phones, 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 Blanford Mere Primary School, 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

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.

ICT is changing the lives of everyone. Through teaching ICT we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. They will be 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.

The school's aims are to:

- Meet the requirements of the National Curriculum programmes of study for computing.
- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- Use ICT and 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 ICT and computing throughout their later life.
- To develop the understanding of how to use ICT and computing safely and responsibly (*see*

BEHAVIOUR, ANTI-BULLYING, E-SAFETY, SRE AND PSHE POLICIES

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.

TEACHING AND LEARNING OF COMPUTING

As the aims of Computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in Computing is for individuals or groups of children to use computers to help them in whatever they are trying to study. So, for example, children might research a history topic by using the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of ICT can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text about, adding animations, adding images etc.

We recognise that all classes have children with widely differing abilities in information technology. This is especially true when some children have access to IT 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.

OUTCOMES

EARLY YEARS

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 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 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.

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.

STRATEGIES FOR THE TEACHING OF COMPUTING

Approximately 39 hours per year are spent on explicit Computing lessons in Key Stage 1 and 2.

When teaching Computing we use a variety of strategies including co-operative group work, individual work and class teaching which are used where appropriate.

We have a computer available in every classroom and a computer suite of 34 computers, two Laptop trolleys containing 30 Notebooks, 12 laptops and 8 iPads. Computers around the school are networked and have Internet access. We keep resources for ICT and computing, including software, in a central store. Interactive Whiteboards are available for all children to access daily.

The computing suite is available for use throughout the school day as part of computing lessons, which are timetabled weekly, as well as for cross-curricular use.

Pupils may use ICT and computing independently, in pairs, alongside a TA or in a group with a teacher.

Excellence in Computing is celebrated in display, presentations, competition and assemblies, including displays in the classroom and around school.

Children will study three aspects of the Computing curriculum; Computer Science, Information Technology and Digital Literacy. 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. At Blanford Mere, we use programmes such as Espresso Coding and Scratch to develop children's computer science skills. 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

Information technology makes a contribution to the teaching of PSHE, SRE (*see PSHE and SRE policies*) and citizenship as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet and e-mail. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse of technology, and they also gain a knowledge and understanding of the interdependence of people around the world.

ONLINE RESOURCES FOR HOME USE

In recent years there has been a boom in the education opportunities that are available online. We have bought into the following to give pupils safe access to online education opportunities outside of school. These include:

- Times Tables Rockstars – including Numbots
- EdShed – including Spelling Shed and Quiz Shed
- Mathletics
- Education City
- Purple Mash

Pupils have passwords that can be used to access these sites. Pupils have been shown how to use them and how to keep their passwords safe from others.

REMOTE LEARNING (*SEE REMOTE LEARNING POLICY*)

Remote learning for Computing will be shared with families when they are absent due to the Covid related reasons.

Remote learning will not be available to those who are ill with a non-Covid related illness and would not normally attend school, or to those children whose parents choose to keep them at home when they have not been advised to do so. This is because children need to be in school and, in line with Government guidance, the school will strongly promote face-to-face contact through school attendance.

Work will NOT be set on the first day of isolation to allow staff time to prepare. Work will be sent from the second day onwards. Staff will prepare work the day before it is set and will ensure that it is published the following morning;

- A child who has a member of their household, who has tested positive for Covid-19 and are not permitted to attend school because they have been in close contact and have been advised to self-isolate;
- A child's whole bubble or identified pupils who is not permitted to attend school because they, or another member of their bubble, have tested positive for Covid-19.
- A child unable to attend school due to a local or national lockdown

EQUAL OPPORTUNITIES AND INCLUSION

We teach computing to all children, whatever their ability, age, gender or race. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the specific needs of children with learning difficulties. In some instances the use of ICT has a considerable impact on the quality of work that children produce; it increases their confidence and motivation and allows access to parts of the curriculum to which the children would otherwise not have had. When planning work in computing, we take into account any targets which are evident on a class' provision map. Teachers identify children who are gifted and talented in the area of computing. It is the teacher's responsibility to ensure that these children are suitably challenged in their use of ICT and computing both in specific computing lessons and in using ICT in other curriculum areas. Opportunities are identified for these children to actively participate in more challenging aspects of computing.

STRATEGIES FOR ENSURING PROGRESS AND CONTINUITY

Planning modules are planned in line with the National Curriculum. Medium term plans are designed to enable pupils to achieve stated objectives, allowing for clear progression as they move up the school. Pupil progress towards these objectives is recorded by teachers as part of their class recording system.

Key objectives to be assessed are taken from the National Curriculum. Teachers regularly assess capability through observations, discussions with pupils and looking at completed work. Regular assessment of computing work is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and computing.

As assessment is part of the learning process it is essential that pupils are closely involved. Assessment can be broken down into;

- Formative assessments are carried out during and following short focussed 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 level. Use of independent open ended tasks, provide opportunities for pupils to demonstrate capability in relation to the term's work. Summative assessment should be recorded for all pupils by their teachers – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgements as we observe and talk to the children during lessons. Once the children complete a unit of work, we make a summary judgement of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit. This information is passed on to the next teacher at the end of the school year.

The Computing subject leader keeps samples of the children's work in a portfolio. This will demonstrate the expected level of achievement in Computing for each age group in the school.

MONITORING AND REVIEW

The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the Computing subject leader. The Computing 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. The Computing subject leader carries out the task of reviewing samples of the children's work and pupil voice.

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 ICT and computing. An electrical inspection is carried out in school every five years. Portable electrical equipment in school is tested by the site manager 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. 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 computing technicians.

- children should not put plugs into sockets or switch the sockets on.
- trailing leads should be made safe behind the equipment

- liquids must not be taken near the computers
- e-safety guidelines will be set out in the e-safety policy, RSE and PSHE policies & AUP

SECURITY

- The ICT and computing technician will be responsible for regularly updating anti-virus software.
- Use of ICT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- Parents will be made aware of the 'acceptable use policy'.
- All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.
- The agreed rules for safe and responsible use of ICT and computing and the internet will be displayed in all ICT and computing areas.

PARENTAL INVOLVEMENT

Parents are encouraged to support the implementation of computing where possible by encouraging use of computing skills at home during home-learning tasks and through the school website. They will be made aware of e-safety and encouraged to promote this at home.

RELATED POLICIES

Our policy relates to Computing, aspects of which sit within a suite of other policies. Our policy applies to all staff (teaching and non-teaching), governors and volunteers, temporary and supply staff working in our school.

Other policies that may be referred to within this policy include:

- Anti-bullying
- Acceptable Use
- E-safety
- Health & Safety
- GDPR
- Remote Learning
- SRE Policy
- Behaviour Policy
- Personal, Social, Health and Economic (PSHE)
- Sex and relationships (SRE)
- Safeguarding and Child Protection

Members of staff responsible:

Mrs J Cameron (Computing Subject Leader)

Consultation Process:

Full consultation with governors, teaching and non-teaching staff.

Review Date:

April 2024