Blofield Primary School

Computing Policy

Reviewed by: F Heasman & Teresa Doggett

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Statement of intent

At Blofield Primary School, we understand that a high-quality computing education is essential for pupils to understand modern information and communication technologies (ICT), and for them to use these skills to become responsible, competent, confident and creative participants of an increasingly digital world.

Throughout this policy, we outline how we, as a school, will deliver the requirements of the Key Stage 1 (KS1) and Key Stage 2 (KS2) computing programmes of study, and to ensure that our pupils have the digital skills they need. We aim to inspire pupils to continue to learn and apply the skills they learn at secondary school, university, and beyond in the workplace.

Intent

At Blofield we understand that technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education. We recognise that technology can allow pupils to share their learning in creative ways. We also understand the accessibility opportunities technology can provide for our pupils. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists. We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We intend to deliver a computing curriculum that prepares pupils to live safely in an increasingly digital British society where pupils can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

Implementation

Computing lessons are taught using the PurpleMash Computing programme of study. This is a clear and effective, cross curricular scheme of work that provides coverage in line with the National Curriculum. Teaching and learning should facilitate progression across all key stages within the strands of digital literacy, information technology and computer science. Children will have access to the hardware (laptops, iPads, programmable equipment) and software that they need to develop knowledge and skills of digital systems and their applications. Teaching and learning should facilitate progression across all key stages within the strands of digital literacy, information technology and computer science. Children will have the opportunity to explore and respond to key issues such as digital communication, cyberbullying, online safety, security, plagiarism and social media. The importance of online safety is shown through displays within the learning environment. Parents are informed when issues relating to online safety arise and further information/support is provided if required. As well as opportunities underpinned within the scheme of work, children will also spend time further exploring the key issues associated with online safety.

Impact

We encourage our children to enjoy and value the curriculum we deliver. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. Finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond. We encourage regular discussions between staff and pupils to best embed and understand this. We also look for evidence through reviewing pupil's knowledge and skills digitally through tools like PurpleMash and observing learning regularly.

1. Legal framework

1.1. This policy is in regard to and compliant with the following statutory guidance:

- DfE (2013) 'Computing programmes of study: key stages 1 and 2'

1.2. This policy links in with the following other school policies:

- Acceptable Use Policy
- E-safety Policy

2. Roles and responsibilities

2.1. The headteacher will:

- Ensure that there is a Primary Computing Policy in place, and that it is regularly reviewed and updated to take into account new developments, both to the primary computing curriculum and to ICT.
- Ensure that the Primary Computing Policy, as written, is disseminated to the computing coordinator, teaching staff and parents, for implementation.
- Hold the computing coordinator to account for the effective implementation of the Primary Computing Policy, including budget expenditure.
- Intervene where it is apparent that the Primary Computing Policy is not being implemented according to its provisions.

2.2. The computing coordinator will:

- Secure and maintain computing resources, and advise staff on the correct use of digital technologies.
- Offer help and support to all members of staff in their planning, teaching and assessment of computing.
- Keep the headteacher and other stakeholders, such as parents, informed about our school's implementation of the primary computing curriculum.
- Keep up-to-date with new developments in computing and communicate such information and developments to colleagues, including, where necessary, through the creation and delivery of bespoke training programmes.
- Attend appropriate in-service training.

2.3. Teachers will:

- Plan and deliver the requirements of the KS1 and KS2 computing programmes of study to the best of their abilities.
- Set high expectations for all their pupils, including pupils with special educational needs and/or disabilities (SEND), pupils from various social, cultural and linguistic backgrounds, and academically more able pupils.
- Encourage pupils to apply their knowledge, skills and understanding of computers and ICT across the curriculum.
- Maintain up-to-date records of both formative and summative assessment.
- Tailor lesson delivery according to pupils' respective abilities.

3. Early years foundation stage (EYFS)

3.1. Although computing is not a statutory part of the EYFS, we will ensure that children of reception age receive a broad, play-based experience of computing through the use of new technologies.

4. Key stage 1

4.1. Pupils will be taught to:

- Understand what algorithms are, and how they are implemented.
- Create and debug simple programs.
- Predict the behaviour of simple programs.
- Create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of ICT beyond school.
- Use technology safely and respectfully, keeping personal information private, and to identify where to go for help and support when they have concerns online.

5. Key stage 2

5.1. Pupils will be taught to:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, and solving problems.
- Use sequence, selection, and repetition in programs.
- Work with variables and various forms of input and output.
- Explain how some simple algorithms work, and how they can detect and correct errors.
- Understand computer networks, how they can provide multiple services, and the opportunities they offer for communication and collaboration.
- Use search technologies, understand how results are selected and ranked, and be able to critically evaluate digital content.
- Select, use and combine a variety of software on a range of devices to design and create programs, systems and content that accomplish specific goals.
- Use technology safely, respectfully and responsibly, recognise acceptable behaviour and identify a range of ways to report online concerns.

6. Curriculum delivery

6.1. We have a class set of laptop computers to support the delivery of the primary computing curriculum.

6.2. An audit of resources is taken on an annual basis to ensure that our computing provision remains appropriate to the latest requirements of the KS1 and KS2 primary computing programmes of study.

6.3. Teaching of digital literacy and ICT is largely delivered through cross-curricular subject links.

6.4. The core requirements of the KS1 and KS2 computing programmes of study, such as coding/programming, will be delivered through the topic scheme of work, or during a dedicated weekly computer lesson.

6.5. The teaching of computing is not restricted to using the laptops but other forms of technology are used across the school to support children in meeting the objectives. Examples of this include: using Beebots in Reception and KS1 to develop an understanding of algorithms as a sequence of steps; digital cameras (IPads) to take photographs and create videos.

6.6. When teaching particular objectives, it may be necessary to give children direct instruction on how to use a certain program, particularly when they are introduced to something they have not encountered before (e.g. be shown basic skills such as saving work and knowing where to retrieve that file from). However, we do recognise the importance of allowing children opportunities to explore and to try and solve problems independently before being shown how. For example, in KS2 children are required to debug programs and so it is essential they investigate trialling an algorithm to identify errors themselves. In order to implement this investigative approach, we plan for open-ended activities in our Computing lessons in addition to guided sessions.

6.7. Web filters are kept up-to-date in order to ensure that pupils don't access inappropriate materials.

6.8. Obsolete or broken machines are sold, repaired or, where repair is not possible or cost-effective, scrapped in accordance with data protection requirements.

7. Differentiation

7.1. We provide suitable learning opportunities for all pupils by matching the challenge of the task to the individual needs and abilities of each pupil. We will achieve this in a variety of ways, including:

- Making reasonable adjustments to the way in which we deliver the computing curriculum, such as providing transcripts of online learning videos to pupils with hearing impairments, or making resources available in a pupil's first language where they use English as an additional language.

- Assigning classroom assistants to individual/groups of pupils, where appropriate, to enable greater one-to-one support.

7.2. The viability of adopting the 'digital leaders' programme, to stretch more academically able children, will be considered by the computing coordinator. This will allow those children to mentor and share their skills with others.

8. Assessment

8.1. Pupils' knowledge and understanding of the primary computing curriculum will be assessed according to the provisions outlined in our school's Assessment Policy.

8.2. Ongoing formative assessment monitors pupil performance and progress during learning; the outcomes of which we will use to ensure that work matches the individual needs and abilities of pupils.

8.3. Summative assessment reviews pupils' progress and abilities, and will be undertaken at the end of each unit, term and school year via a number of means appropriate to the year group (e.g. portfolios of work).

8.4. Samples of work will be kept for groups of children, stored in both classrooms and on the school network, within relevant class and pupil folders.

9. Staff training

9.1. The computing coordinator will be responsible for the identification and delivery of staff training requirements.

9.2. Staff training requirements will be met by:

- Auditing staff skills and confidence in the use of computers and ICT on an annual basis.
- Arranging top-up training for individual staff members as required.

9.3. The computing coordinator will remain up-to-date with the latest developments in computing through subscriptions to relevant journals, attendance at relevant courses, etc., and will pass on any newly acquired knowledge/skills to staff members, where appropriate.

10. Monitoring and evaluation

10.1. We appreciate that computers and ICT are rapidly developing, with new uses and technology being created all the time.

10.2. We will review this policy on a biennial basis in line with our school's policy review schedule.

10.3. We will review our web filters on an annual basis in order to ensure that pupils continue to be protected from inappropriate content online.

11. E-Safety

11.1. Internet access is planned to enrich and extend learning activities. The school acknowledges the need to ensure that all pupils are responsible and safe users of the Internet and other communication technologies.

11.2. Although the school offers a safe online environment through filtered internet access, we recognise the importance of teaching our children about online safety and their responsibilities when using communication technology. This forms part of studies in Computing and is discussed as part of some Personal, Social Health & Economic Education (PSHE) topics. The school has a separate E-safety policy which outlines how the school ensures pupils use communication technology responsibly and are aware of how to report concerns.