Bushfield Road Infant School

Computing Policy

The National Curriculum

'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 – 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.' (National Curriculum, 2014)

The key aims of the national curriculum outline that children should be able to:

- 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
- Be responsible, competent, confident and creative users of information and communication technology.

1. Curriculum Intent

At Bushfield Road Infant School, we use a structured sequence of lessons which enables our teachers to ensure that they have covered the skills required to meet the aims of the national curriculum. Cross-curricular links are also important in supporting other areas of learning. Our lesson plans and resources help children to build on prior knowledge at the same time as introducing new skills and challenges. The content allows for a broad, deep understanding of computing and how it links to children's lives. It offers a range of opportunities for consolidation, challenge and variety. Children will develop problem-solving skills and learn to evaluate and apply information technology.

Teachers use technology to engage children and enhance teaching and learning across the curriculum but it does not replace the skills of reading a book or writing. It enables children to become responsible, safe, competent, confident

and creative users of information technology. Children will see the digital world as part of their world, extending beyond school, and understand that they have choices to make. They will be confident and respectful digital citizens going on to lead happy and healthy digital lives in the future.

2. Implementation

The school teaches computing both as a discrete subject as well as through other areas of the curriculum. Computing provides many cross-curricular links with other curriculum subjects. Our principal aim is to develop the children's knowledge, skills and understanding in computing through providing a rich and creative curriculum that meets the individual needs of our pupils. We do this through a mixture of whole class teaching and individual or group activities. We teach the three main parts of the Computing Curriculum:

- **Digital Literacy** involves using ICT purposefully as a tool to support and enhance their learning. We teach children to use the internet safely to search for information. We also teach children to use ICT to present their work in different ways.
- **Information Technology** involves teaching children about the technology that is used at home, in the locality and in the wider world. Children are also taught about e-safety and how to keep safe online.
- **Computer Science** involves teaching children how to create and debug simple programs using algorithms.

We give children the opportunity to work on their own and collaborate with others to complete their computing tasks.

We plan activities so that they build on prior learning. While we give children of all abilities the opportunity to develop their skills, knowledge and understanding. We also build plan progression so that there is an increasing challenge for the children as they move up through the school.

3. Impact

Computing is enjoyed by teachers and pupils across the school. All children use technical vocabulary accurately. Children improve their computing skills and recognise the impact of ICT on the world around them. Children will talk about how to use ICT safely. Children will become more confident using ICT to present their work. Children will create and debug simple programs. All children in school can speak confidently about their computing work.

4. Teaching and Learning

We recognise that all classes have children with widely differing computing abilities. This is especially true when most children have access to ICT 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 through a range of strategies:

- 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.
- Using additional adults to support the work of individual children or groups of children.

5. The Foundation Stage

Despite computing not being explicitly mentioned within the EYFS Statutory Framework, there are many opportunities for young children to use technology to support their learning in other areas of the curriculum. Children in Nursery and Reception classes will have the opportunity to explore and use ICT in order to support their learning within the other areas of the curriculum.

6. Computing and SEND

At our school we teach computing to all children, whatever their ability. Computing forms part of the school curriculum to provide a broad and balanced education for all children. Through our teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs.

7. Assessment and Recording

We assess the children's work in computing whilst observing them working during lessons.

We keep evidence of the children's work in computing to demonstrate the level of achievement.

8. Resources

Pupils have access to a range of resources to support their learning. All our classrooms have three PC's, 4 ipads, an interactive whiteboard and a visualiser. Beebots are kept centrally.

9. Monitoring and Review

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

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