Computing Policy

Barley Lane Primary School
Curriculum Policy

Contents

We aim to **B**elieve in Ourselves, **L**earn together, **P**ersevere and **S**ucceed. In order to achieve this, and to achieve national standards for all of our children, we aim that our children:

- Communicate clearly and respectfully
- Have a good knowledge of the world and how history has impacted on this
- Develop cultural appreciation through rich and valuable experiences
- Show resilience, especially when faced with new situations

Our curriculum is underpinned by our five core values: Compassion, Honesty, Respect, Responsibility and Resilience. We aim to widen the life experiences for our children, with a particular focus on cultural and creative experiences. It is our intention that we provide regular opportunities for our children to visit different places of interest, experience the work of different international artists and to visit museums and places within their locality. These are designed to be memorable learning experiences which help to build character.

Curriculum Intent

At Barley Lane Primary School, we believe that computing is an essential part of the national curriculum. Computing is a fundamental part of modern-day life and therefore provides a wealth of learning opportunities, explicitly within computing and also across other curriculum subjects.

Through the study of computing, children are able to develop a wide range of essential skills, knowledge and understanding that they will need for the rest of their lives. Computers have become a part of everyday life. For most of us, technology is essential to our daily lives, at home and at work. 'Computational Thinking' is a skill that children must be taught in order to provide them with essential knowledge and skills that will enable them to participate effectively in the digital world.

Our computing curriculum fits within our wider curriculum intent in aiming to make connections with other subjects and to empower and develop children's understanding of the digital world. Our overall curriculum aims for our children to become resilient, well-rounded individuals with a strong

sense of self and purpose. Within the intent of our computing curriculum, we endeavour to prepare our children for a digital world that is constantly changing and evolving.

The aims of teaching computing, as outlined in the national curriculum, are to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- 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

Where possible, links made to inclusion and diversity will be implemented. This could it be through starters, displays or cross curricular learning.

Our mission as a school is to ensure that all students have the opportunity to all bring their unique and brilliant qualities to the computing community.

Curriculum Implementation

At Barley lane, we use a scheme of learning called 'Rising Stars – Switched on Computing' in order to achieve the aims of the national curriculum. A range of three to five units are taught depending on the progression of skills expected throughout each year group. Computing is taught once a week for an hour in one of our two Computing Suites. The new national curriculum defines three clear aspects of computing curriculum:
- Computer Science (CS)
- Information Technology (IT)
- Digital Literacy (DL).

Children will be given the opportunity to develop their knowledge and understanding in each area from the early years till they reach Year 6.

Early Years Foundation Stage

In EYFS, despite computing not being explicitly mentioned within the Early Years Foundation Stage (EYFS) statutory framework, there are many opportunities for young children to use technology to solve problems and produce creative outcomes. In particular, the school's current use of the Barefoot Computing Scheme covers many areas of the EYFS framework. This scheme provides opportunities for pupils to develop their ability to use computational thinking effectively, such as through undertaking projects involving the concepts and approaches. Not only will children be keen to again use a device they had previously enjoyed using, their cognitive load will also be reduced, meaning they are more likely to succeed when undertaking activities linked to the next stage in their learning.

Key Stage 1

In Key Stage 1, the children will learn to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They will be taught to create and debug simple programs and use logical reasoning to predict the behaviour of simple programs. They will be shown how to use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content as well as recognise common uses of information technology beyond school. They will be taught to 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

In Key Stage 2 the children will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. They will use sequence, selection, and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs. Children will be taught to understand computer networks, including the internet, and the opportunities they offer for communication and collaboration. They will use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content. Children will be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that accomplish given goals. They will use technology safely, respectfully and responsibly; recognise acceptable /unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Curriculum Impact

Progression in computing will be assessed throughout each key stage through the children's ability to know, apply and understand the matters, skills and processes specified in the relevant programme of study. We assess the children through:

- Observing children at work during weekly computing sessions.
- Questioning the children in relation to their programme of study in order to assess their understanding and comprehension.
- Assessment/marking the work produced by the children and discussion of their next steps.
- Assessment made through termly observations on Scholarpack.

An age-related assessment will be given to parents/carers through annual reports.

Linked Policies

Curriculum Policy
Home School Agreement
Online Safety Policy
Child Protection and Safeguarding Policy