Buttsbury Infant School

Together we grow

Aspiration, Respect, Resilience, Kindness

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E3   Computing Policy

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Signed	A Robinson Exec Head

Purpose of Study

A high-quality computing education equips children 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 children 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, children are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that children 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.

Aims of Computing

The national curriculum for computing aims to ensure that all children:

- 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

Curriculum Intent

At Buttsbury Infant School the intent of our curriculum is to enrich the children's knowledge and understanding of how to use different hardware and software, so that they become life long learners and confident users of different technology both inside and outside of school. Keeping safe online and offline is paramount and we ensure the children learn how to keep safe when exploring the world wide web.

Curriculum Implementation

We encourage a healthy growth mindset by promoting social skills including good manners, resilience, perseverance, self-awareness, consideration and cooperation. The curriculum supports children to become fantastic role models and the very best versions of themselves.

Units of learning are blocked, well sequenced and build on previous learning. Lessons ensure that progress is achieved through small steps, allowing children to develop their subject knowledge, consolidate skills and apply their learning. Strands in computing include: Digital Communication and Sharing Information; Collecting, Analysing, Evaluating Real World Data; Control and Programming; Producing and Editing Media; and Modelling and Simulations, and safety.

At Buttsbury Infant school, computing lessons may include:

- Identifying and using different technology around us, both online and offline
- Mastering technological knowledge
- Programming and debugging algorithms and creating a string of instructions
- Developing keyboard, touchpad and mouse control
- Working as a team and encouraging each other to succeed
- Keeping safe all the time when using different technology and knowing what to do when situations may arise.
- Applying mathematical and literary skills and knowledge on different programs and apps

Curriculum Impact

Our aim is to develop children who are confident, responsible and effective users of technology both within Computing lessons   and   across   the   curriculum

Early Years Foundation Stage (EYFS)

During the Early Years Foundation Stage, young children are given opportunities to develop their computational skills within the Early Learning Goals for Understanding the World. They become familiar with different forms of technology and its uses through a range of adult led and child led activities. They explore a range of technology, such as computers, laptops, Chromebooks, iPads and programmable toys, as well as a variety of software and apps. The children learn how to stay safe when they use devices that connect to the internet and learn what a reasonable amount of screen time looks like.

Computing in relation to the National Curriculum

The curriculum is organised to ensure that children's experience of computing is developed through activities that bring together requirements from the Key Stage 1 programme of study.

Children are taught to:

- use common forms of information technology inside and beyond school
- learn how to handle, collect, analyse and evaluate data and solve problems using different information.
- control programmable robots and software using instructions and algorithms, debugging and abstracting where needed
- create digital media including sounds, pictures and animations
- keep safe when online

Planning of Computing

Computing planning is based on the National Curriculum and the Kapow Primary scheme of work and is aligned with the statutory Computing framework published by the DfE.

Relationships with other subjects

Children are given opportunities, where appropriate, to develop and apply their computing capability in their study of computing - particularly for listening, accessing information, performing, creating, manipulating and storing sounds. Wherever possible, links are made to other subject areas,

Links with literacy:

Examples of computing activities and tasks which support the development of *Literacy*:

- Reading skills: for researching facts and reading keyboards
- Comprehension: when researching for non-fiction facts and during data handling units
- Writing: using word documents to build keyboard skills and spellings
- Speaking skills: verbalising and discussing algorithms and instructions

Links with maths:

Examples of computing activities and tasks which support the development of *Maths:*

- Data handling- using data to make conclusions and comparisons between groups
- Directional language- using technical language to direct a programmable robot or piece of software
- Statistics- representing data in different forms

Inclusion:

- There will be opportunities in Computing for all children to practise skills and extend their knowledge
- The programme of study for EYFS and KS1 will be taught in ways appropriate to children's abilities
- There will be equal access to technology and software
- Participation in a wide variety of computing activities will be encouraged

Assessment and Recording

Recording children's computing achievements and progress can be accomplished in a variety of ways:

- Saving work onto school drives.
- Visual recordings - photographs, art work or iPads
- Recording videos of programming software and hardware.
- and the written language

Children's progress is measured against descriptions in the Early Learning Goals and the National Curriculum.

Role of the Computing Subject Leader

The computing subject leader will:

- Monitor policy and teaching and learning in computing
- Provide assistance to all staff when requested, in order to implement the computing policy consistently throughout the school
- Organise resources to support the school computing policy and teachings
- Co-ordinate purchasing, organisation and distribution of resources
- Arrange in-service support
- Liaise with outside agencies, other schools and colleagues