Great Bardfield Primary School

Computing Policy
May 2022

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

Date of re - issue: 2022
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Intent:

All pupils at Great Bardfield Primary School have the right to have rich, deep learning experiences that balance all the aspects of computing. With technology playing such a significant role in society today, we believe 'Computational thinking' is a skill, children must be taught if they are to be able to participate effectively and safely in this digital world. A high-quality computing education equips pupils to use 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. At Great Bardfield Primary School, the core of computing is Computer Science, Information Technology and Digital Literacy, in which pupils are introduced to a wide range of technology, including laptops, iPads and interactive whiteboards, allowing them to continually practice and improve the skills they learn.

The computing curriculum aims to create digital citizens who are able to express themselves respectfully and develop their ideas through information and computer technology– at a level suitable for the future workplace and as active participants in a digital world. Online safety is a crucial part of the computing curriculum and we aim to ensure pupils are aware of their digital footprints and their online responsibilities as a digital citizen *(see Online Safety Policy)*.
With this in mind, we have established a school curriculum plan for computing as an entitlement for all pupils that:

- Includes content, which is logical, relevant, broad and balanced in terms of the areas of subject content we have selected which reflect the guidance of and in line with National Curriculum.
- Sequences lessons to ensure that pupils can build on previous knowledge and understanding as they tackle more complex and demanding algorithms, data representation and programmes as they progress through the school.
- Builds upon and has continuity with the provision for 'Communication and Language' established in the Early Years Foundation Stage and addresses the knowledge and skills expectations;
- Is inclusive in terms of delivering the same curriculum to all our pupils irrespective of specific learning needs or disabilities and adapting where necessary through, for example, in class support, providing different learning environments, alternative learning activities and assessment outcomes.
- Creates a desire to embrace challenging activities, including opportunities to undertake high-quality research across a range of computing topics;
- Develops a sense of curiosity about computer networks and hardware as well as how and why people use technology.
- Enables pupils to analyse problems in computational term, and have repeated practical experience of writing computer programs in order to solve such problems;
- Enables pupils to evaluate and apply information technology analytically to solve problems;
- Allows pupils to communicate ideas well by utilising appliances and devices throughout all areas of the curriculum.

Implementation:

Subject Leaders are provided with an additional time per year in addition to their PPA, to plan their curriculum. As part of the planning process, teachers need to plan the following:

- A medium-term plan which plans a sequence of lessons that allow our pupils not only to build subject knowledge and understanding but become increasingly adept at computational thinking, specialised vocabulary and their grasp of subject concepts through child led learning.
- A cycle of lessons for each area of computing, which carefully plans for progression and depth allowing for child-centred learning involving interactive and practical opportunities for pupils to work independently, in pairs and also in groups to provide them with sufficient time and space to explore their own ideas.
- Wherever possible, we provide our pupils with a range of technology and scenarios similar to those they would encounter in the future workplace.
- Similarly, we provide varied and adapted ways for pupils to record the outcomes of their work including the use of Seesaw, Code.org, Common Sense Media, Be Internet Legends and computer programmes such as Word and PowerPoint to ensure knowledge becomes embedded.
- The schemes of work for computing build their knowledge and understanding in incremental steps of increasing complexity until they reach the point where they are able to build their own simple programmes and algorithms.
- Our learning and teaching in computing also recognise the importance of E-Safety and is supported by the use of drama, varying scenarios, discussion through the use of common-sense media and Be Internet Legends as a platform.
- Mastery and challenge questions for pupils to apply and deepen their learning in a philosophical/open manner;
- Opportunities to showcase their work using a variety of presentation styles., especially through Seesaw.
- Assemblies, special days, celebrations and events.
- Homework is set via Tapestry for EYFS and KS1 and Seesaw for KS2, which children complete with parents at home.

At Great Bardfield Primary School our Computing Curriculum is delivered through a combination of discrete teaching sessions linked with our key skills (respect, resilience, reflectiveness, resourcefulness and responsibility) and school values. It is important to note that knowledge and understanding are interlinked; learning from one area may be pertinent to others. A typical Computing session will include all children working towards the same learning objective. How they meet the learning objective will look different for the individual child.

Learning may include:

- Explicitly teach Computer Science: Programming and problem solving including algorithms and debugging
- Explicitly teach Information Technology: Presenting information, creating content and searching for information.
- Explicitly teach Digital Literacy: E-Safety and using IT beyond school.
- Teach the topic-specific skills: relevant learning (sometimes from earlier years and key stages) that provides the foundation for new explicit learning.
- Lessons are inclusive and are adapted in a range of ways to suit the needs of the learner.
- Where available, LSAs are used to support individuals or groups of children.

SEND

Children with SEND are taught within the lessons where support is given as required. Additional support staff may withdraw small groups or individuals to adapt the learning to allow for child-specific needs.

Within the Computing lesson, teachers not only provide activities to support children who find computing difficult, but also activities that provide opportunities for children to apply higher level knowledge skills.

CROSS CURRICULAR LINKS

Throughout the curriculum, opportunities exist to extend and promote Computing. Where possible, children are given opportunities to apply their computational knowledge and skills to other subjects. For example:

- Children are given time to apply these skills within their English lessons through both reading and writing.
- Links are made with Maths through topics such as number, position and direction and geometry.
- Links are made with PE through topics linked with Dance and outdoor and adventurous activities units.
- Links are made with Science through topics such as researching famous scientists or recording experiments.
- Links are made with RE for example watching video clips or exploring important religious buildings around the world.
- Links are made with History for example watching video clips, researching historical time periods and presenting information.
- Links are made with Geography through using online maps, watching video clip, researching and comparing geographical areas and presenting information.
- Links are made with all subjects through Seesaw and presentation of knowledge.

RESOURCES

Whole school resources are available and shared between classes. Each class has a desktop computer and interactive whiteboard. Classes have a small number of iPads each to allow children to access TTRockstars, Bug club and a range of other academic apps, such as White Rose 1 Minute-Maths. During the week, each class has a whole morning and whole afternoon slot to access a whole class set of iPads that can be used for any subject. These are to support the application of sharing learning evidence through Seesaw. All classes have access to a classroom laptop that can be used at any point. These are often used to support SEND children with fine motor skills and typing skills.

COMPUTING

Throughout the school, all children are given access to computer programs to enhance their learning.

1. Seesaw – an app to record the children's individual learning in any subject.
2. Bug Club - an app used to support the reading and comprehension of a variety of online books.
3. TT Rockstars – an app used to support the everyday learning and practice of times tables.
2. Google maps – used to support the learning of History and Geography fieldwork skills and visiting of important places and monuments.
3. Code.org - supports the teaching of Computer Science including programming.
4. Common Sense Media - supports the teaching of E-Safety and Digital Literacy.
5. Be Internet Legends - supports the teaching of E-Safety and Digital Literacy.
6. Pages – an app available on the iPads to create documents.
7. Keynote – an app available on the iPads to create presentations.
8. Number – an app available on the iPads to create spreadsheets.

Impact:

Our Computing Curriculum is high quality, each enquiry which forms our programme of learning and teaching sets clear objectives and outcomes for the pupils in terms of knowledge and understanding and skills acquisition. The schemes of work also suggest a range of ways in which the teacher can assess whether a pupil has achieved these outcomes. We ensure that when assessing our pupils, evidence is drawn from a wide range of sources to inform the process including:

- Interaction with pupils during discussions and related questioning
- Day to day observations
- Practical activities such as model making and role play drama, the gathering, presentation and communication of fieldwork data and writing in different genres.
- The outcomes of each enquiry serve to inform the teacher's developing picture of the knowledge and understanding of each pupil and to plan future learning

accordingly.
- Summative termly assessments which enable us to record and track progress and attainment.

At the end of each term we make a summative judgement about the achievement of each pupil against the subject learning goals for computing in that year. At this point we decide upon a 'best fit' judgement as to whether the pupil has achieved and embedded the expected learning goals, exceeded expectations or is still working towards the goals.

ROLE OF THE COMPUTING LEADER

- To take the lead in policy development.
- To support colleagues in the delivery of the Computing curriculum
- To monitor progress in Computing – e.g. leading staff CPD, scrutiny of work, analysis of assessment data.
- To take responsibility for the choice, purchase and organisation of central resources for Computing, in consultation with colleagues.
- To be familiar with current thinking concerning the teaching of Computing, and to disseminate information to colleagues.
- The leader will be responsible to the Headteacher and will liaise with the named link Governor.

MONITORING AND EVALUATION

The subject leader monitors and evaluates the quality and standard of Computing throughout the school and supports teachers to develop their practice. In practice, this includes learning walks, dropping into Computing sessions, book looks and discussions with both pupils and staff. Opportunities for teachers to review the scheme, policies and other support materials are given during staff meetings and Subject Leader release time. Leaders are provided with additional time per year in addition to their PPA, to plan their curriculum.

Other relevant documents:
- Marking and feedback policy
- Homework policy
- Early Years Foundation Stage policy
- Assessment policy
- Computing Skills progression
- Computing Long Term Plan
- SEND policy
- Online safety policy
- Social Networking Policy
- Photography Policy

This policy also should be read alongside the National Curriculum in England (published September 2014) and other documents from the Standards and Testing Agency.