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Computing Policy

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## Intent

All pupils at Spring Hill Community 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.

We teach a curriculum that enables children to become effective users of technology who can:

* Understand and apply the essential principles and concepts of Computer Science, including logic, algorithms and data representation;
* Analyse problems in computational term, and have repeated practical experience of writing computer programs in order to solve such problems;
* Evaluate and apply information technology analytically to solve problems;
* Communicate ideas well by utilising appliances and devices throughout all areas of the curriculum.

Implementation

Teachers deliver computing lessons using The National Centre for Computing Education (NCCE), Teach Computing scheme of work. We teach computing using these 12 pedagogy principles:

Lead with concepts

Unplug, unpack, repack,

Create projects,

Challenge misconceptions

Structure lessons

Work together

Model everything

Add variety

Make concrete

Read and explore code first

Get hands on

Foster program comprehension

Our computing curriculum ensures a cycle of lessons for each area, which carefully plans for progression and depth. It provides challenge for pupils to apply their learning in a philosophical/open manner. We enhance the curriculum with trips and visiting experts who enhance the learning experience. Knowledge and skills are mapped across each topic and year group to ensure systematic progression. We have a range of devices including iPads, laptops and class computers to ensure that all year groups have the opportunity to use a range of devices and programs for many purposes across the wider curriculum, as well as in discrete computing lessons. Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps they have been taught. The implementation of the curriculum also ensures a balanced coverage of computer science, information technology and digital literacy. The children will have experiences of all three strands in each year group with increasing level of difficulty and challenge as children move through school. Subject specific language and computing in the real world is embedded within the delivery of computing.

## Impact

Our Computing curriculum is high quality, well thought out and is planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress.

In addition, we measure the impact of our curriculum through the following methods:

A reflection on standards achieved against the planned outcomes.

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

Children can analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems.

Children can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

Children are responsible, competent, confident and creative users of information and communication technology.

## Teaching and Learning Computing in the Early Years

We teach computing in Reception as an integral part of the topic work covered during the year. Computing in reception is taught in-line with whole school using the Teach Computing scheme. Computing contributes to a

child’s personal and social development

## Key Stage One and Two Curriculum

At Spring Hill we use the Teach scheme as the basis for our curriculum planning. This scheme has an integrated, practical, exploratory and child led approach to computing.

The learning within this scheme is based on:

* Digital literacy
* Online safety
* Computational thinking
* Computers and hardware
* Coding

While there are opportunities for children of all abilities to develop their skills and knowledge in each unit, the progression planned into the scheme of work means that the children are increasingly challenged as they move through the school. All computing learning in the scheme is based around increasing children’s digital literacy and their computer science knowledge.

## Computing Events

Children take part in national events, assemblies and have opportunities to enrich their computing learning. These including safer internet week and nation coding week.

## Resources

The following resources are available to aid the teaching of computing at Bindle Gregson Lane Primary School;

* Teach Computing scheme
* sound system, laptop and projector in the hall
* 30 laptops in trolley 1
* 30 laptops in trolley 2
* Class room chrome books.
* 15 Ipads
* 30 Chrome books

## Assessment

Children demonstrate their ability in Computing in a variety of different ways. Teachers will assess children’s work in Computing by making informal judgements as they observe them during lessons and flashback discussion. Children will record written work in their computing folders and digital work will be saved in their class file. At the end of every unit, children will complete the assessment as outline in the assessment overview. This data is then analysed by the subject leader.

## Equal opportunities

Activities should be carefully planned by the class teacher and be differentiated where appropriate for children with SEND and equally provide challenge for more able children. All resources/materials have been reviewed in line with understanding of protected characteristics. Pupils will be encouraged to value social and cultural diversity through computing experiences.

## Inclusion

We recognise that in all classes, children have a wide range of computing ability, and so we seek to provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:

* setting tasks which are open-ended and can have a variety of responses;
* setting tasks of increasing difficulty;
* grouping children in mixed ability groups;
* providing resources of different complexity, depending on the ability of the child;
* use of adults to support the work of individuals or groups of children.

## Equalities

At Spring Hill Community Primary School, we are committed to creating an inclusive and equitable environment where all children, regardless of their background or protected characteristics, are treated with respect and dignity. We have taken several measures to eliminate discrimination and other prohibited conduct in accordance with the Equality Act 2010. At Spring Hill Primary School, we see the need for a positive and effective equality. More information on this is available in our Equality policy.

## Role of the Subject Leader

The coordination and planning of the computing curriculum are the responsibility of the subject leader, who also:

* keeps colleagues and school governors informed about developments in Computing and provides a strategic lead and direction for the subject;
* discusses progress with the Head Teacher and evaluates strengths and weaknesses in Computing;
* reviews the success of the Teach Computing scheme and reviews evidence of children’s work;