

Computing Policy

This is a whole school policy including EYFS

1 Aims and objectives

- 1.1 Computing is concerned with how computers and computer systems work, and how they are designed and programmed. Pupils studying computing will gain an understanding of computational systems of all kinds, whether or not they include computers. Computational thinking provides insights into many areas of the curriculum, and influences work at the cutting edge of a wide range of disciplines.

The new National Curriculum presents the subject as one lens through which pupils can understand the world. There is a focus on computational thinking and creativity, as well as opportunities for creative work in programming and digital media. The introduction makes clear the three aspects of the computing curriculum: computer science (CS), information technology (IT) and digital literacy (DL).

There is a clear and specific link between the Online Safety policy and the Computing policy. The Computing subject leader works with the online safety team to ensure that online safety is maintained as well as teaching the children explicitly about online safety.

We aim:

- To develop children into e-safe, e-inspired and e-confident users through the embedding of IT skills across the whole curriculum.
- To develop parents as 21st Century facilitators of their child's learning.
- To improve pupils' learning in computing across all subjects.
- To enable all staff and pupils to use confidently and effectively the full range of new technologies on offer.
- To continue to up skill teachers in the use of IT to improve and enhance the delivery of the broad and balanced curriculum on offer at Springmead.
- To further enable teachers and children to communicate with the wider world using technologies such as e-mail, video, animation, web building and coding skills.
- To continue to train teachers and other adults in the possibilities of technology so that they can broaden the children's horizons.

2 Teaching and learning style

- 2.1 Technology is continuing to develop at an increasingly rapid rate and at Springmead we recognise that children will require skills in the future of which we have little concept at present. The expectations on children are no longer 'to be able to use a simple program and to be able to click and drag' For sure these are skills we need to ensure all our children possess but the reality is they will be able to do this and far more. It is our job is to prepare them for the future. Children need to become "lifelong learners" with the confidence and ability to develop skills and understanding when meeting new challenges in the workplace. They need to become fully acquainted with current technologies and be able to adapt their skills and learning style to accommodate changes. These are elements, which are vital in all areas of a child's education, but in computing, they need to be able to use technology to present information, communicate and discover. They are also entitled to expect their learning environment in school to contribute to the development of these skills and to have access to suitable, up-to-date equipment.

- 2.2 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

Review period: 12 months

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.

- 2.3** At Springmead School, computing will be taught both as a discrete subject, and in a cross-curricular way when the opportunity presents itself.

The Computer Suite and the PCs and laptops distributed around the school will be used to help pupils access the Computing curriculum, along with a range of other resources such as programmable toys and iPads.

The Computing subject leader and the Principal will continually monitor the resources required to deliver the Computing element of the new National Curriculum.

3 ICT curriculum planning

- 3.1** The school uses a variety of resources to encompass the national curriculum for computing as the basis for its curriculum planning. Teachers are encouraged to make use of cross-curricular opportunities and wider topics to provide contexts for learning in computing. We use Discovery Education as the main tool to teach coding and as a bank of resources but we encourage the use of a wide range of schemes and ideas to complement our objectives.

- 3.2** We carry out the curriculum planning in computing in three phases (long-term, medium-term and short-term). Our long-term computing plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression within the curriculum plan.

- 3.3** Our medium-term plans give details of each unit of work for each term. They identify the key learning objectives for each unit of work and for each lesson and stipulate the curriculum time that we devote to it. Individual teachers pull out the areas of the computing curriculum that relate to their theme and incorporate this into their theme planning. Where required teachers plan specific computing lessons, outside of the theme curriculum, with key learning objectives. The computing subject leader is responsible for keeping and reviewing these plans.

- 3.4** The class teacher is responsible for selecting the computing component for each lesson.

4 Early Years Foundation Stage

- 4.1** We teach computing in the foundation stage as an integral part of the topic work covered during the years. We relate the computing aspects of the children's work to the objectives set out in the Early Years Foundation Stage. The children have the opportunity to use the computers, whiteboards, laptops and iPads amongst other resources.

5 The contribution of Computing to teaching in other curriculum areas

- 5.1** Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while the Internet prove very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way and access learning on a worldwide scale.

5.2 English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They have the opportunity to develop their writing skills by communicating with people over the Internet. They learn how to improve the presentation of their work by using desk-top publishing software.

5.3 Mathematics

Many computing activities build upon the mathematical skills of the children. Children use computing in mathematics to collect data, make predictions, analyse results, and present information graphically. They also acquire measuring techniques involving positive and negative numbers, and including decimal places.

5.4 Personal, social and health education (PSHE) and citizenship

Computing makes a contribution to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet and e-mail. Through the discussion of moral issues related to social media, children develop a view about the use and misuse of technologies, and they also gain a knowledge and understanding of the interdependence of people around the world.

5.5 All foundation subjects contribute to many aspects of the themed curriculum of which computing plays an important part.

6 Teaching computing to children with special needs and disabilities

6.1 At Springmead School we teach computing to all children, whatever their ability. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. In some instances the use of technology has a considerable impact on the quality of work that children produce; it increases their confidence and motivation. When planning work in computing, we take into account children's individual targets.

7 Assessment and recording

7.1 Teachers assess children's work in computing by making informal judgements as they observe them during lessons. On completion of a piece of work, the teacher marks it and comments as necessary. At the end of a unit of work s/he makes a summary judgement about the work of each pupil. We use this as the basis for assessing the progress of the children and to pass information on to the next teacher at the end of the year.

7.2 The computing subject leader keeps samples of the children's work in a portfolio. This demonstrates the expected level of achievement in computing for each age group in the school.

8 Resources

8.1 There is a networked laptop or desktop computer available in every classroom as well as a computer suite with a network of computers for groups of children. Each classroom has an interactive whiteboard as well as additional ones in the computer suite and basement. The school has Internet access for computers in the suite and laptops. We keep resources for computing in a central store.

8.2 Along with the computers, the school has the following:

Hardware

- colour printer/ scanner/ copier x 2
- Black and white printer in management office
- An Air printer
- a bank of 9 iPads which can be used for group or individual work;
- an iPad in each class with Apple TVs
- interactive whiteboard x 9;
- headphones with adapters to allow collaborative work,
- a set of programmable BeeBots which can be used for group or individual work;
- class set of electronic keyboards,
- calculators.

Software

The school has a full library of software to allow full coverage of our curriculum.

9 Monitoring and review

The role of subject leaders is to:

- provide a strategic lead for the subject with the aim of improving standards;
- offer support and advice to colleagues on the subject;
- monitor pupil progress in that subject area across the school through observations and discussion with staff and children. Also through leveling and scrutinizing work;
- review the way the subject is taught at the school and plan for improvement; - Inset day.
- understand current standards in the subject across the school and how this compares to expected targets;
- plan how we are going to improve standards in conjunction with staff and principals;
- provide efficient resource management for the subject;
- review the curriculum plans for the subject and ensure that there is coverage of the National Curriculum 2014, where we feel it is appropriate, and that progression is planned into schemes of work;
- to keep up to date with the developments in the subject at both national and local level;
- keep detailed information on their subject in a subject leader file;
- work with the principal to produce a development plan for the subject which links the whole school objectives;
- review policy annually;
- to review each week the requirements put in the communications book for the computing technician by the staff in the School

The school gives subject leaders non-contact time, so that they can carry out the necessary duties involved with their role.

This policy is the principal's ongoing responsibility its effectiveness is reviewed annually in consultation with the staff.

Signed:

Date: