



Computing Subject Policy  
Subject Leader: TBA  
Policy Review Date: April 2019



### **Aims and Objectives**

Computing is changing the lives of everyone. Through teaching Computing, we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling children to be confident, creative and independent learners.

The National Curriculum 2014, states that a high quality-computing curriculum equips children to use computational thinking and creativity to understand and change the world. The core of computing is computer science and at Epsom Primary and Nursery School, children will be taught the principles of information and computation; how digital systems work and how to put this knowledge to use through programming. Children will be equipped to use ICT to create programs, systems and a range of content. Computing at Epsom Primary and Nursery School, ensures that children become digitally literate, able to use and express themselves and develop their ideas through ICT, at a level suitable for their academic stage, that will develop them for the future workplace and as active participants in a digital world

The aims of computing are:

- Provide a relevant, challenging and enjoyable Computing curriculum for all pupils.
- Meet the requirements of the national curriculum programmes of study for computing.
- Use computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use computing throughout their later life.
- To enhance learning in other areas of the curriculum using computing.
- To develop the understanding of how to use computing safely and responsibly.

### **Teaching Strategies**

#### **a) The Early Years**

It is important in the foundation stage to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature Computing scenarios based on experience in the real world, such as in role-play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to

develop their communication skills. This is particularly useful with children who have English as an additional language.

In the Foundation stage year, children will:

- Show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.
- Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
- Know that information can be retrieved from computers.
- Complete a simple program on a computer/Beebot
- Use ICT hardware to interact with age-appropriate computer software.
- Recognise that a range of technology is used in places such as homes and schools.
- Select and use technology for particular purposes

b) By the end of Key Stage 1:

Children explore how familiar things work and talk about, draw and model their ideas. They learn how to design and make safely and start to use ICT as part of their designing and making. Children may work in pairs and small groups for some activities.

Throughout KS1, children will:

- Understand what algorithms are how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.
- Use logical reasoning to predict the behaviour of simple programs.
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of ICT beyond school.
- Use technology safely and respectfully, keeping personal information private, identify where to go to for help and support when they have concerns about content or contact on the internet or other online technologies.

C) By the end of Key Stage 2:

Children explore how programming is a large part of everyday life. They are exposed to many different digital devices and how to use them safely and developing their knowledge and understanding of how digital devices have their place in society.

- Design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs.

- Understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration.
- Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.
- Select, use and combine a variety of software, (including internet services), on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

## **Planning**

Teachers plan using the Computing Scheme of Work Overview for their year, the breakdown of National Curriculum objectives and the progression of Key Skills for Computing for Key Stage 1 and 2. (See Appendix).

## **Assessment**

Assessment is the responsibility of the individual class teachers and will be based on evidence gathered through discussion and observation of the pupil during the lesson and by the child's recording of activities where appropriate e.g. planning, designing and photographs of practical activities. The marking of the Learning Journey's will reflect the extent at which the Key Skills in Computing have been met (based on Key Skills for Computing for Key Stage 1 and 2 in Appendix).

## **Inclusion**

We teach Computing to all pupils, whatever their ability. We provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs.

## **Management**

The Computing Curriculum Leader is responsible for the implementation of this policy; the management and repairs of Computing resources through School Based Curriculum Support, monitoring Computing standards of achievement and progression, and working with SLT to arrange appropriate Inset for all members of staff where necessary.

Epsom Primary and Nursery School is committed to continuing the reliability of the network and we receive support from GLF to support the school with technical matters.

The Class Teachers are responsible for the delivery of this policy and the care and security of the hardware and software.

The school is committed to the ongoing resourcing of Computing equipment and software, in relation to the School Development Plan.

The school is responsible for ensuring that copyright regulations are not infringed

## **Health and Safety**

### a) Resources

At Epsom Primary and Nursery School, children and staff have access to a range of ICT equipment, including chromebooks which may be controlled by QWERTY keyboard and mouse control. The computers are linked to the school network and server and have facilities to connect to the Internet through Broadband connection.

### b) Safety

When a new piece of digital equipment is released, the staff are given training on this first; this is then disseminated through to the children.

### c) Guidance

All adults leading Computing lessons/ activities should ensure that they have read and understood the Computing Policy and the E Safety Policy before commencing teaching.

Adults should ensure that:

Computing equipment is not left out and unsupervised, floors and work surfaces are kept clean and tidy when transporting digital equipment around school and all tools used must be of good quality, in good condition and stored safely.

Children should be given suitable instruction on the operation of all equipment before being allowed to work with it.

Children should be taught to recognise and consider hazards and risks and to take action to control these risks, having followed simple instructions.

## **Monitoring and review**

The monitoring of the standards of children's work and of the quality of teaching in computing is the responsibility of the computing subject coordinator. Their work also involves supporting colleagues in the teaching of this subject, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. Lesson observations/learning walks are also, occasionally, undertaken and the subject coordinator regularly reviews evidence of the children's work. The subject leader is responsible for giving the curriculum lead an annual summary report in which the strengths and weaknesses in the subject are evaluated and areas for further improvement are indicated.