

# Computing Policy



# **Ranelagh Primary School**

## **Computing Policy**

### **Introduction**

The use of information and communication technology is an integral part of the National Curriculum and is a key skill for everyday life. Computers, iPads, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Ranelagh Primary School, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose of this policy is to state how the School intends to make this provision.

### **Rationale**

The School believes that Computing:

- gives pupils immediate access to a rich source of materials;
- can present information in new ways which helps pupils understand, access and use it more readily;
- can motivate and enthuse pupils;
- can help pupils focus and concentrate;
- offers potential for effective group working;
- should be embedded across all curriculum areas as well as being taught as a discrete subject;
- has the flexibility to meet the individual needs and abilities of each pupil.

### **Aims of the Teaching of Computing**

The School's aims are to:

- provide a relevant, challenging and enjoyable curriculum for Computing for all pupils;
- meet the requirements of the National Curriculum Programmes of Study for Computing;
- use ICT and Computing as a tool to enhance learning throughout the curriculum;
- respond to new developments in technology;
- equip pupils with the confidence and capability to use ICT and Computing throughout their later life;
- enhance learning in other areas of the curriculum using ICT and Computing;
- develop the understanding of how to use ICT and Computing safely and responsibly.

The National Curriculum for Computing aims to ensure that all pupils:

- can understand and apply the fundamental principles of Computer Science, including logic, algorithms, data representation, and communication;
- 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 and creative users of Information and Communication Technology

## Resource provision

The School acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible PC system by investing in resources that will effectively deliver the strands of the National Curriculum and support the use of computing across the School. Teachers are required to inform the School Based Technician of any faults as soon as they are noticed and make of log of them via the RM support console. ICT and computing network infrastructure and equipment has been sited so that:

- all classrooms contain an Interactive Whiteboard to enhance the teaching and learning in all lessons across the curriculum;
- All KS2 classes have Chromebooks at a ratio of 1:2 stored in their classroom;
- KS1 have a class set of Chromebooks per year group, which are stored in portable trollies, which can easily be transported between the classes;
- A bank of 35 iPads for KS1 and KS2;
- A bank of 25 ipads in EYFS for pupil use;
- Two Touch and Tilt tables in EYFS;
- All class based teachers have for their own iPad which is used to assess the pupils using 2simple software, and to register attendance using Emerge;
- Each phase has access to a class set of headphones;
- A class set of programmable Lego Wedo is available for teaching of programming;
- A class set of Bee-bots are available for the teaching of programming.

In addition to this, there is a variety of other ICT equipment in School to support the children in accessing the curriculum;

- A variety of software is available for supporting lessons across the curriculum;
- Pupils have access to resources online to cover all aspects of the curriculum. These resources are monitored and used under the guidance and supervision of the class teacher;
- To ensure that copyright laws and virus protection procedures are adhered to staff, pupils and parents are not permitted to run software brought in from outside School on School machines;
- The School has a technician who visits the schools 2 ½ days per week. Online support is available at other times through the RM Support Console;
- A nominated governor takes a particular interest in ICT and Computing in School.

## G-Suite for Education

All staff and pupils have their own school Google account, to enable to them access the myriad of resources available through the G-Suite learning environment. Permissions and access are managed by the Computing Subject Leader and the School Based Technician. Gmail is disabled for staff and pupils.

Pupils primarily use their accounts to;

- Log into Chromebook;
- Access Google Classroom, Google Docs, Google Sheets, Google Slides etc;
- Access go Goformative, Maths Prodigy, Storyboard That, Vocabulary.com.

Staff primarily use their accounts to;

- Access the Team Drive;

- Manage their Google Classroom;
- Access the School Calendar.

## Teaching and Learning Objectives

### **Early Years Foundation Stage:**

- It is important in the Early Years Foundation Stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers.
- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in role play.
- Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy.
- Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets.
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language

### **By the end of Key Stage 1 pupils should be taught to:**

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions;
- write and test simple programs;
- use logical reasoning to predict the behaviour of simple programs in computing; organise, store, manipulate and retrieve data in a range of digital formats;
- communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond School.

### **By the end of Key Stage 2 pupils should be taught to:**

- 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.

## Entitlement to Computing Curriculum

The pupil's entitlement to Computing is based upon the Programmes of Study for Computing as defined in the 2016 National Curriculum. 1 Hour per week is designated to the discrete teaching of Computing skills in KS1 and KS2.

Ranelagh uses a bespoke version of the 3BM scheme of work to meet the objective set of in the programme of study, except for KS2 Online Safety, where Google's Be Internet Awesome is used instead.

An adult must supervise children when they are accessing information from the Internet. Our service provider does filter information but staff are responsible for the information accessed by pupils. When a teacher plans to use a website the content should be checked before a lesson.

## Cross curricular links

As a staff we are all aware that ICT and computing capability should be achieved through Core and Foundation Subjects. Where appropriate, ICT and Computing should be incorporated into schemes of work for all subjects. ICT and Computing should be used to support learning in other subjects as well as develop ICT and Computing skills.

## Assessment and record keeping

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the 3BM Scheme of Work which are themselves link to the National Curriculum. Assessing Computing is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and Computing. We assess the children's work in Computing by making informal judgements as we observe the children during lessons. Computing work is saved in Google Classroom or J2E. At the end of each unit staff must upload two pieces of work to J2E Review; one assessed as working at the expected standard, and a piece assessed as working above the expected standard. All children are summatively assessed termly using the marksheets saved on the school system, as is consistent with other subjects.

## Monitoring and evaluation

The Subject Leader is responsible for monitoring the standard of the children's work and the quality of teaching. This may be through lesson observations, J2E or Google Classroom scrutiny or looking at other data for the subject. The Subject Leader is also responsible for supporting colleagues in the teaching of Computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the School. The subject leader is allocated special time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.

## Staff training

- The Computing Subject Leader will assess and address staff training needs as part of the annual subject action plan or in response to individual needs and requests throughout the year.
- Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the Subject Leader.
- Teachers will be encouraged to use ICT and Computing to produce plans, reports, communications and teaching resources

## Pupils with special educational needs and Disabilities (see also SEND Policy)

We believe that all children have the right to access ICT and Computing. In order to ensure that children with SEND achieve to the best of their ability. It may be necessary to adapt the delivery of the Computing Curriculum for some pupils. We teach ICT and Computing to all children, whatever their ability. Computing forms part of the National Curriculum to provide a broad and balanced education for all children. Through the teaching of Computing 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. Where appropriate Computing can be used to support SEND children on a one to one basis where children receive additional support.