



# Computing Policy

<b>Knaphill Federation of Schools</b>	
<b>Policy:</b> Computing	
<b>Governors' Committee Responsible:</b>	
<b>Policy Originator:</b> L Fini	<b>Review Period:</b> Two years
<b>Status:</b> Statutory	<b>Next review Date:</b> Autumn 2020

## **The Knaphill Federation of Schools Computing Policy 2017**

**Next review date: Autumn 2019**

### **Introduction**

Computing is an integral part of the National Curriculum and is a key skill for everyday life. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At the Knaphill Federation of Schools we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

### **Aims**

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.

### **Rationale**

Knaphill School believes that IT, computer science and digital literacy:

- Are essential life skills necessary to fully participate in the modern digital world.
- Allows children to become creators of digital content rather than simply consumers of it.
- Provides access to a rich and varied source of information and content.
- Communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- Can motivate and enthuse pupils.
- Offers opportunities for communication and collaboration through group working both inside and outside of school.
- Has the flexibility to meet the individual needs and abilities of each pupil.

### **Objectives**

By the end of Key Stage One, pupils should be taught:

- 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 information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

By the end of Key Stage Two, pupils should be taught:

- 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.

### Resources

Our school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Resources if not classroom based are located in the computing suite.

Computing network infrastructure and equipment has been sited so that at the Lower School:

- There is computing area that has 11 computers.
- 8 Learn pads in each of the six KS1 classrooms.
- 8 Learn pads to share in the reception classes.
- Beebots.

Computing network infrastructure and equipment has been sited so that at the Junior School:

- Every classroom from year 3 to year 6 has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- There is computing suite available to the whole school.
- 45 iPads available.
- There is an iPad Sync & Charge cabinet in school.
- Internet access is available in all classrooms.
- Each class from year 3 – year 6 has an allocated slot one afternoon per week for teaching computing as a discrete subject.
- The computing suite, Fizzbooks and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has a computing technician.

## **Planning**

Knaphill Junior School will be using iCompute for Primary schools - the whole-school scheme of work for Year 3 to Year 6 pupils. iCompute fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing. Pupil progress towards these objectives will be recorded by teachers as part of the school recording system. Staff will follow iCompute's planning guidance, which has been adapted for the School's needs. A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effected.

## **Assessment**

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. The school also uses iCompute's assessment criteria as a guide. Assessing computing is an integral part of teaching & learning and key to good practice.

We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

## **Monitoring and Evaluation**

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring cycle. This may be through lesson observations, pupil discussion and evaluating pupil work.

We allocate time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.

## **Cross Curricular Links**

As a staff we are all aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding.