Forest Hall Primary School

Computing Policy

Purpose

At Forest Hall Primary School, we understand that the world in which our children live is changing and we have a responsibility to prepare them for the world in which they are growing up. High quality education in Computing will teach pupils to be responsible, competent, confident and creative users of information and communication technology and the internet.

Aims

Through our Computing Curriculum at Forest Hall Primary School, we aim for all pupils to:

Key Stage 1:

- 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
- use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet
- recognise common uses of information technology beyond school.

Key Stage 2:

- design, write and debug 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
- use logical reasoning to explain how some simple algorithms work 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- use technology safely, respectfully and responsibly; know a range of ways to report concerns and inappropriate behaviour
- 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

Through the programming aspect of the Computing curriculum at Forest Hall Primary School we aim to develop positive attitudes towards:

- **Making mistakes** - recognising mistakes as a normal part of problem solving
- **Perseverance/resilience** – having a go to see what happens and to keep going, determined to find solutions
- **Collaboration/sociable learning** – sharing ideas, talking together to solve a problem.

The computing curriculum is split into 3 strands; Computer Science, Information Technology and Digital Literacy. An overview of strands and what these might include:

Element	Strand	What it might include
Computer Science	control, programming	Writing and designing code. Solving problems, giving instructions.
Computer Science	Computational Thinking	'Unplugged' activities that demonstrate knowledge and understanding of the theory of computer science and how machines work.
Information Technology	Information handling and digital research.	Safe internet use and 'smart' searches, how the internet works, searching, data handling, databases and data storage.
Information Technology	Text, Graphics, Multimedia and storytelling.	Word processing, desktop publishing and PowerPoint. Presenting and storytelling with text, images, sound, video and animation.
Digital Literacy	Digital Imagery, Graphical Modelling and Art	Digital paint packages, 3D digital design, photo editing, digital representation on real things.
Digital Literacy	Sound	Recording, editing and creating sounds and music digitally.

Suggested Key Stage appropriate ideas and resources for the Computing Curriculum

EYFS/KS1

- Toy items – free play with radio controlled toys to control simple devices (forward, backwards, left and right)
- Physical control with Beebots – to program, plan its actions and predict how it will respond to commands. Programming to achieve a goal.
- Human Robot – verbal 'programming' to move around the room. Introduce simple commands on cards. Pupils could order cards and explore what happens if the cards are shuffled, introducing the principles of accuracy in commands. 'Unplugged' programming without computers.

KS1

- Human Crane http://code-it.co.uk/unplugged/humancraneplan.pdf 'Unplugged' programming without computers.
- Jumbo http://primary.naace.co.uk/activities/index.htm#jumbo Planning, testing and debugging. Sequencing and the need for precision.
- BeeBot Activity cards – as an extension to the EYFS activities.

- Lite Bot – programming to achieve a goal, available as IPad app and PC via online game.
- A.L.E.X App – programming to achieve a goal.

KS2

- Robo Boogie – http://roboboogie.codeclub.org.uk (can be used on IPads and PC) Programming, algorithms and Sub routines
- Scratch – create simple actions on screen or develop more complex games through use of algorithms
- Kodu – http://kodugamelab.com Create simple actions on screen or develop more complex games through use of algorithms
- Physical computing through Lego WeDo – available as loan kits through North Tyneside ICT SLA
- Physical computing using Raspberry Pi units in school for UKS2.

Time allocation

Aspects of computing are taught weekly in class through use of interactive whiteboards and clevertouch TVs. Beebots, Laptops and iPads may be booked out for use in teaching sessions. Use of the IT suite is timetabled on a weekly basis for classes from Reception to Year 6 with a session length of approximately one hour. It is possible to extend sessions in the IT suite to complete a block of work when agreed with colleagues.

Responsibilities

The role of the coordinator

- To produce and implement a computing development plan
- To ensure timetabled access to ICT suite for each year group for the teaching of ICT and computing skills
- To offer help and support to all members of staff in their teaching, planning and assessment of the computing curriculum
- To attend appropriate network meetings/ training and ensure staff keep up to date with relevant information and development including E-Safety
- Lead and organise staff training using new hardware/ software
- To ensure the agreed rules for safe and responsible use of ICT and computing and the internet is displayed in all ICT and computing areas
- To take the lead in maintaining the school website and support staff on how to use addition features
- To have enthusiasm for computing and encourage staff to share this enthusiasm.

The role of the class teacher

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning ICT and computing skills and using ICT and computing across the curriculum.

They will:

- Plan and deliver the requirements of the Computing Curriculum relevant to their key stage
- Where appropriate, ICT and computing should be incorporated into work for all subjects as it should be used to support learning in other subjects as well as develop ICT and computing skills
- Secure the motivation and concentration of children through relevant and creative use of school resources
- Provide equality of opportunity through teaching approaches
- To record any faults with equipment/software as soon as they are noticed in the ICT log book held centrally in the school office
- Seek advice and support from the relevant persons where needed regarding software, hardware or training issues.
- Ensure every opportunity to promote E-Safety is effectively used and that school E-Safety and Acceptable Use policies are adhered to.

The role of head teacher

- To ensure use of ICT and computing is in line with the school's 'Acceptable Use Policy' (AUP)
- All staff, parents and children must sign a copy of the schools AUP

The role of parents and carers

- To support the implementation of the school's acceptable use policy. Particularly for year groups/children that have use of IPads
- To encourage and support children in their use of ICT and computing to complete homework activities and out of school learning

The role of the SLA

A service level agreement with the Local Authority is in place to support with hardware, audio visual equipment and software. All staff members are required to record any faults as soon as they are noticed in the ICT log book held centrally in the school office. The office staff must be informed and a call to the technician will be logged.

The role of the Governing body

A governor will be invited to take a particular interest in ICT and computing in the school.

S Nicholson

Computing Lead

December 2017

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