Computing Policy

May 2020

(VPS, D. Moss)

Approved by Chair_____

Review Date: _____

Introduction

The use of Computing 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 but a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Villiers 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 become Computing proficient.

Aims and Objectives

- 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 computational skills.
- To develop an understanding of how to use Computing safely and responsibly.

The National Curriculum for Computing

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 digital devices and the Internet.

Rationale

The school believes that Computing:

- Gives pupils immediate access to a rich source of materials.
- Can present information in new ways which help 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.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Computing in EYFS

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 for children who have English as an additional language.

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 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.

Key stage 2

Pupils should be taught to:

- 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.

• Select, use and combine a variety of software (including Internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Computing at Villiers Primary School

Villiers Primary School believes that Computing is an integral part of the Teaching and Learning across the entire curriculum. We aim to be a well-resourced school with laptops, iPads, recording devices, programmable toys, cameras, green-screens and interactive whiteboards available to support the delivery of high quality Computing lessons. Laptops and iPads have the necessary software installed and updated as required to deliver the computing curriculum through the planned Programmes of Study. All computers and devices are networked and linked to the Internet. The school has an 'Acceptable Use Policy' and, as part of SHINE Academies, an 'ESafety Policy', which Parents/Guardians are asked to agree to, before their child uses an device or laptop at school.

Entitlement

The pupil's entitlement to Computing is based upon the Programmes of Study for Computing as defined in the 2016 National Curriculum. The schemes of work used to deliver these programmes of study are:

- Online Safety – Planned by teachers, supported with Squirrel Learning and Online Resources.

- Computer Programming/Science – Rising Stars supported with Squirrel Learning resources and CPD.

- Digital Competency – Rising Stars supported with Squirrel Learning resources and CPD.

Curriculum Design

From Years 1-6, children will study the following on a cycle:

- Online Safety

- Digital Animator

- Digital Artist

- Digital Broadcaster

- Digital Data Handler

- Digital Designer

- Digital Film Maker

- Digital Musician

- Digital Programmer

- Digital Publisher

- Digital Researcher & Presenter

Digital Programmer and Digital Researcher and Presenter will be 'over-taught' topics which will be covered each year throughout a child's primary school career embedding fundamental, life-transferrable skills.

In EYFS, children will have access to a wide range of technology to support their journey to reaching the Early Learning Goals. Equipment will include laptops, tablets, programmable toys and recording devices.

Implementation

Pupils will have the opportunity to develop their Computing capability in the core and foundation subjects. For details of specific applications, see the 2016 National Curriculum for all other curriculum areas. Opportunities provided by the class teacher will enable the children to work both individually and in small groups. For all Computing lessons, the teacher will ensure that interactive strategies are used; teacher modelling is used; introductions are included and plenary sessions are incorporated to meet the learning objectives as per the Teaching and Learning Policy.

At Villiers Primary School, pupils will have experience with networked Laptops, Printers, Bee-Bots, Codapillars, Data Logging equipment, sensing equipment, calculators, digital media, Interactive Whiteboards. They will also have experience with the Internet and a variety of software that allows teachers to provide for progression of skills, concepts and applications. As an inclusive school, Computing is made accessible to children with

Special Educational Needs, by providing them with suitable software and tasks, and with extra support in the use of software packages and peripherals available.

In Computing lessons, pupils with specific learning needs also have access to, where appropriate:

• Visual prompts to engage and increase attention.

• Real objects to explore and manipulate.

• Symbols for key vocabulary.

• Opportunities for repetition, to consolidate and reassure.

• Opportunities to use special interests where appropriate.

• Support where necessary to develop new skills.

Assessment

The pupil's work in Computing is assessed continuously throughout the topics that are taught. Records are kept in the form of pupils' in-book blogs, saved work in the 'Student In' folder and recorded data on class Pupil Trackers. Each class across Year groups 1-6 also have digital evidence file indexes containing pupils' work. A range of abilities are usually targeted to give a whole group best-fit throughout the academic year.

Teacher assessments, including the end of year level achieved, are reported to parents in the annual reports, and assessments are passed on to the next class teacher. Pupils are actively encouraged to use online software subscribed to by the school, such as Purple Mash, Timestable Rock Stars and Literacy Shed to support their English and Maths skills and to prompt a continued learning at home culture.

Management

The Computing Curriculum Leader and Senior Leadership Team are 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. Villiers is committed to continuing the reliability of the network. S4S are currently contracted as IT Support providing at least one Computing Technician for one day per week to support 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.

Review

The policy will be reviewed annually with the aim of meeting any new developments and initiatives both nationally and locally.

Internet Access and Online-safety (see also the trust-wide ESafety Policy)

All parents agreed to their child accessing and using the internet as part of their entitlement to the curriculum. This is done through the parent welcome pack. Although Internet access within school is protected by Sophos Firewall and Filtering systems as well as the school's own security system, the risks of Internet use are still present. We believe it is vital to teach Online-safety as part of the Computing curriculum. This is embedded into each unit by the class teachers through personalised planning adapted from the Rising Stars Units of Work and resources provided by Squirrel Learning.

Copyright

Villiers Primary School has a responsibility to teach and uphold the laws and guidance on copyright. Digital content, such as images, blogs, videos on the Internet are not freely available and we have a responsibility to teach children how to check and use information and images appropriately. Advice is given through CPD opportunities and through an open door policy with the Curriculum Leader.