

## Computing Policy September 2020

### Rationale

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.

Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

### **The National Curriculum in England 2014**

### Vision

At West Cliff Primary School, we value the contribution that Computing can make for the benefit of all pupils, staff, parents and governors. We strive to provide safe Computing opportunities in all subjects to motivate and inspire pupils and raise standards across the curriculum. We hope everyone in our school community will become lifelong learners equipped to meet developing technology with confidence, enthusiasm and the skills that will prepare them for a future in an ever-changing world.

## Aims

- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for computing.
- To equip all learners with the experience and skills of Computing that they will use in a rapidly changing technological world.
- Learners in our environment will be confident and independent in their use of computing to solve problems across the curriculum.
- Children have a growing awareness of how Computing is used in the world around them and of the benefits that it provides.
- Innovative use of resources to support learning throughout the school.
- Children, parents, staff and governors to be aware of E-Safety issues.

## Objectives

### **Early years**

Technology in the early years is play-based, particularly in our Nursery setting. Although pupils have access to iPads, Smartboards and an Apple TV, they also have opportunities to develop their technology skills through operating mechanical toys (knobs and wind up or pull back toys) and pressing buttons or lifting flaps to achieve new effects such as sound, movement or images. Opportunities are also built in for pupils to complete a simple computer program independently and to interact with age-appropriate software.

**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 and computing the behaviour of simple programs.
- 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.
- 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 and access**

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards providing resources that will effectively deliver the strands of the national curriculum and support the use of ICT and computing across the school.

Teachers are required to inform the technician of any faults as soon as they are noticed.

- Every classroom from foundation to y6 has a laptop connected to the school network and an interactive whiteboard with sound, DVD and video facilities.

- A laptop trolley containing laptops with internet access is available to use in classrooms, although, in most cases, their functionality has been replaced by iPads.
- Every child in KS1 and KS2 has an iPad that is solely theirs. Pupils in Nursery and Reception have access to iPads as required.
- The iPads and laptops 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 an IT and computing technician who is in school daily.
- All teachers and HLTAs have access to a staff laptop and/or iPad to plan and create exciting and interactive lessons for the whole curriculum.
- We have two Apple TVs – one in the nursery and one in the hall for whole school use.
- In 2020/21, we will be setting up a 'green screen' resource for use when creating videos.

## Continuing Professional Development

Developing our pupils' computing skills forms a key part of our whole school ethos. It is therefore vital that staff have access to regular training opportunities in order to ensure that they are well-equipped to support our pupils.

It is expected that the subject leader and technician, as a minimum, will keep up to date with advances in primary school computing and disseminate relevant information to staff. At West Cliff, this is done through attendance at training events and conferences; regular access to Apple Classroom, including any updates; and through use of Twitter and other online sources.

The technician delivers regular CPD sessions for computing/IT during staff meetings staff meeting. The content of these sessions may be in response to a specific identified need, dissemination of good practice or a sharing of skills.

During 2021, the subject leader, as a minimum, will complete online training to become a certified 'Apple Teacher'. This opportunity is available to all school staff.

## Monitoring

The subject leader monitors the computing provision through a variety of methods, including learning walks, pupil interviews and reviewing pupils' work on the iPads and within Dropbox.

## Curriculum

From September 2020, the Apple teacher guides (Everyone can...) will be used to plan and deliver the computing curriculum, enabling progression within and between year groups.

Online safety will be taught using Google's 'Be Internet Legends' teaching resources [Sharp, Alert, Secure, Kind, Brave].

Year group	Coding	Online safety	Other
1	Everyone can code – Learn to code 1	Be Internet Legends (Google)	Everyone can create – music Everyone can create – drawing Everyone can create – photos
2	Everyone can code – Learn to code 1	Be Internet Legends (Google)	Everyone can create – music Everyone can create – drawing Everyone can create - photos
3	Everyone can code – Learn to code 1	Be Internet Legends (Google)	Everyone can create – music Everyone can create – drawing Everyone can create - photos Everyone can create – video
4	Everyone can code – Learn to code 1	Be Internet Legends (Google)	Everyone can create – music Everyone can create – drawing Everyone can create - photos

			Everyone can create – video
5	Everyone can code – Learn to code 2	Be Internet Legends (Google)	Everyone can create – music Everyone can create – drawing Everyone can create - photos Everyone can create – video
6	Everyone can code – Learn to code 2	Be Internet Legends (Google)	Everyone can create – music Everyone can create – drawing Everyone can create - photos Everyone can create – video

## Assessment

There is no formal summative assessment of the Computing curriculum. Formative assessment takes place during lessons and support/challenge is provided as required.

From September 2020, the school will start to use 'Balance' - an online curriculum planning and assessment platform. At the time of writing, this is in its infancy, but it is likely that, as the year progresses, it will be used to record assessments against the key objectives for the computing curriculum.

Progress and attainment in Computing are discussed during parents' evenings and comments are provided within the end of year written reports to parents. These views are informed by teachers' observations during lessons and by reviewing work saved to Dropbox or stored on individual pupil iPads.

## Technical support

West Cliff made the decision several years ago to employ a technician who is based in the school and can respond promptly to any technical issues. As a result,

staff and pupils are able to rely on technology to support teaching and learning. The technician's role also includes delivering extra-curricular activities linked to computing, providing training to staff members and supporting pupils, where appropriate.

Partly as a result of the Covid-19 pandemic, the school has decided to embed a mobile device management (MDM) solution. This will enable the school to respond even more effectively to technical difficulties if remote learning is required in future.

### **Digital leaders**

Pupils who show an exceptional understanding of a given app are given the opportunity to become a Digital Leader. Within this role, pupils can provide support to other pupils both within and beyond their year group and to staff members, sharing their expertise with others.

### **Awards**

Although the school is not currently working towards a specific award for Computing, the long-term aim is to become an Apple Distinguished School. At present, the eligibility criteria are as follows:

#### Established one-to-one programme

*A one-to-one Mac or iPad programme for students and staff has been in place for more than two academic years. All students in a school use Apple devices as their primary learning device, and all teachers use Apple devices as their primary teaching device.*

#### Innovative use of the Apple platform

*Staff deeply integrates Apple apps (Photos, iMovie, GarageBand, Pages, Keynote, Numbers, iBooks Author, and Clips), educational apps from the App Store, books from Apple Books, and other digital resources into the curriculum.*

#### Staff proficiency with iPad or Mac

*Teachers are highly proficient in the use of Apple products. For schools in countries where Apple Teacher is available, 75 percent of teachers in a school must be recognised as Apple Teachers before the Apple Distinguished School application deadline.*



### Documented results

*Evidence of student success is documented through school-based research practices that measure year-to-year improvement and programme sustainability. Staff and students demonstrate how best practices in learning and teaching are continuously evolving with Apple technology.*

### **Remote learning**

During the Covid-19 school closures, pupils used their individual iPads to access remote learning with daily tasks and feedback provided by class teachers throughout the school. The learning from this will be reviewed and used to further improve our remote offer for any future partial or full closures, as well as informing good practice within school.