West Cliff Primary School
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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 ICT and computing for all pupils.

· Meet the requirements of the national curriculum programmes of study for ICT and 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

It is important in the 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 available to them For example: driving a remote-controlled toy; use walkie-talkie sets or recording images using cameras. Audio recording and playback devices (story phones, audio pegs, talking turtles) can also support children to develop their communication skills. This is particular useful with 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 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 I 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.

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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 16 laptops with internet access available to use in classrooms.
· **Every child in KS2 has a I pad that is solely theirs. Y1 and 2 have a class set of I pads they share, Reception has 8 I pads.**
· Each class from y1 - y6 has an allocated slot for teaching of specific ICT and computing skills.
· The ipads and laptops are available for use throughout the school day as part of ICT and computing lessons and for cross curricular use.
· Pupils may use ICT and computing independently, in pairs, alongside a TA or in a group with a teacher.
· The school has an ICT and computing technician who is in school daily.
· All teachers and HLTAs have access to a staff laptop to plan and create exciting and interactive lessons for the whole curriculum.
· A range of resources are accessible for use to support learning (e.g. microphones, cameras, pro-bots)