



Computing Policy

Summer term 2019

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Governing committee responsible:	Pupils, Strategy & Resources committee		
Governor approval:	No	Website:	No
Staff responsible:	K Garton	Date produced:	Summer term 2019

Introduction:

Purpose:

The use of Computing is an integral part of the National Curriculum and all pupils at Clarborough Primary School are entitled to a high-quality Computing education, which will equip pupils to use computational thinking and creativity to understand and change the world. We believe that through its implementation in other curriculum areas and studying the fundamental core that is computer science, pupils will understand how digital systems work and the principles of programming. At Clarborough Primary School, we recognise the importance of developing strong skills in information and communication technology in order to develop enhanced digital literacy skills, giving them the opportunity to become active and inclusive digital citizens in future workplaces and the digital world. It is important to us that we create a culture that incorporates the principles of online safety across all elements of school and above all, that every pupil learn how to use technology safely, responsibly, respectfully and securely.

Aims and principles:

At Clarborough, we believe that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole-school curriculum but overall in the day-to-day life of our school.

We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our pupils.

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the national curriculum programme of study for Computing at Key Stage 1 and 2
- To respond to new developments in technology
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and Computing.
- To develop the understanding of how to use computers and digital tools safely and responsibly

In particular, Computing offers students with learning difficulties opportunities to:

- Work with increasing independence in communication, language and literacy
- Work on skills across the curriculum with increased confidence and understanding
- Develop and enhance their work in all areas of the curriculum

- Become fully involved in physical and practical activities using tools, such as Clicker and Seesaw technology.

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

Consultation:

In order to implement the Computing curriculum, all teaching staff were consulted and agreed to maintain the aims and principles set out within this policy. The Headteacher and Governors were consulted and encourage the use of the wider community to embed learning experiences.

Sources and references:

Department for Education, Teaching online safety in school: Guidance supporting schools to teach their pupils how to stay safe online, within new and existing school subjects, June 2019

Procedures and practice:

Steps:

Intent – To become confident and effective digital citizens. We encourage our children to think critically by exploring a range of skills and programs/applications, to embed a deeper understanding of the Computing curriculum. All pupils access and follow the Computing curriculum, which is embedded in the whole-school topic, and the Education for a Connected World Framework, which allows for the progression of knowledge and skills through sequence and structure.

Implementation – Pupils will have the opportunity to develop their Computing capability in the core and foundation subjects. 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 objective.

Impact – A broad and balanced knowledge of computer science, information technology and digital literacy, will enable the children to use these skills to become effective and inclusive digital citizens in a digital world.

Roles and responsibilities:

Governors:

Governors are responsible for the overall direction of the school and for encouraging pupils' moral, social and cultural development. A strong partnership between the governing body and the school on issues of Computing development, resourcing and e-safety is essential for a dynamic, relevant and inspirational environment.

Headteacher:

- To ensure that policy is adhered to and the associated policies such as the Safeguarding, Social Media Policy and SEND policies.
- To monitor Computing Leader's Action Plan and performance of the Computing Leader
- To create opportunities for technological growth, which includes, approving budgets and forecasted expenditure and resources.
- To approve CPD training
- To secure technical support service and maintenance contracts

Teachers:

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning Computing and using their knowledge, skills and understanding of Computing across the curriculum.

The class teacher will also:

- secure pupil motivation and engagement
- provide equality of opportunity using a range of teaching approaches and techniques
- use appropriate assessment techniques and approaches
- assist the Computing lead in the monitoring and recording of pupil progress in Computing.
- Model the online safety principles consistently
- Embed the online safety principles

Admin staff:

- Maintains the school website content.
- Controls emails sent to parents via ParentMail.
- Posts approved requests to the school's social media accounts.

- Supports procurement of resources and technical services.
- Supports the technician with some data management.

Technician:

- Routinely checks school filtering, monitoring and virus protection.
- Sets up new hardware and installations.
- Maintains network connectivity and stability.
- Supports the Computing Leader and Head Teacher with future infrastructure needs and associated projected costs.
- Conducts routine scheduled maintenance/updates on systems.
- Fixes errors/issues with hardware and software set-up, prioritising as needed.

Pupils:

Pupils should follow the guidelines laid out in the Acceptable Use Policy within their planner, which is read aloud with the class teacher at the start of the academic year. They should ensure that they use the computers and equipment appropriately at all times. It is expected that children will follow the school's behaviour policy when working online. They are also expected to adhere to the school's anti-bullying policy.

Parents and carers:

Parents should stay vigilant to the websites and content that their children are accessing. They should also endeavour to talk to their child on issues relating to online safety and the use of the internet. If they have any questions or concerns, this should be raised with their child's teacher, the Subject Leader for Computing or the Headteacher. Informative posters are provided at each parental consultation, outlining how to keep children safe online. The Computing coordinator and teachers will update these in accordance with current concerns.

Aspects:

Equal opportunities:

The National Curriculum states that, "All pupils, regardless of race, class or gender, should have the opportunity to develop computing capability." It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ability, including able and gifted children, ethnicity and social circumstance, have access to the curriculum and make the greatest progress possible. As a result, we hope to enable all children to develop positive attitudes towards others. Resources for SEN and gifted children will be made available to support and challenge appropriately.

Health and Safety (including online safety):

All use of computer equipment is governed by an Acceptable Use of ICT policies for pupils, staff and visitors. Refer to Teaching online safety in school document (Department for Education 2019).

At Clarborough Primary School, we recognise the importance of health and safety issues and the potential risks with regard to Computing equipment, especially when using the hardware and accessing the Internet and pupil data.

All teachers are responsible for making sure the hardware and software are used correctly and safely on a day-to-day basis. Any problem should be reported to the Computing technician and the Computing coordinator. All equipment is regularly PAT tested and any problems are swiftly dealt with.

The children are shown how to switch the computers on and off safely and how to insert and remove external devices such as CDs, USB sticks and headphones. It is also demonstrated how to adjust the brightness and contrast of the screen and how to reduce and increase the volume to ensure it is safe. At Clarborough Primary School, specific children's headphones are used which cancel noise and have volume restrictors in place to protect ears.

After twenty minutes on the computer, the children should take a break to perform simple stretching exercises to relieve the muscles they have been using.

Online safety

In reference to the 2019 document, 'Keeping children safe in education', Clarborough follows guidance set out under the 'Online safety' section, working to safeguard children under the three risk areas of:

content: being exposed to illegal, inappropriate or harmful material; pornography, fake news, racist or radical extremist views

contact: being subjected to harmful interaction with other users; commercial advertising as well as adults posing as children or young adults

conduct: personal online behaviour that increases the likelihood of, or causes harm; sending and receiving explicit images or online bullying.

Staff will regularly receive updated safeguarding training and the Computing leader is responsible for updates delivered to staff which concerns the rapid changes and evolution of technology and online safety. Online safety for children is integrated into class assemblies, PSHE sessions, computing sessions and any other sessions where technology is accessed.

Resources to help teach safeguarding in education include: teaching online safety in school, all staff referring to the UKCIS 'Education for a connected world framework' when planning and delivering sessions, accessing such websites as Parent Zone and Google's 'Be Internet Legends' and the PSHE Association website to develop the PSHE curriculum.

Monitoring and filtering is in place to reduce the risk of exposure from all three main risk categories mentioned above. The IT technician will work with class teachers to ensure the

swift response in blocking websites that are flagged as being harmful towards children or inappropriate for the age range.

Children will not have access to the school WiFi password and only those granted via permission of the headteacher, will have this entered into their home devices (such as kindles or any other tablet) when it facilitates learning for those with additional learning needs. These children's devices will be protected via the filtering software in place on the school network.

Planning:

A wide range of Computing resources are used to facilitate the planning and implementation of such content. Clarbrough Primary School currently accesses plans which include iLearn2, and Code.org. Where possible, planning should include aspects of the Magenta Principles and Chris Quigley's style of learning, when developing a creative curriculum.

The Computing subject leader is responsible for reviewing plans for key skills, Computing sessions and for monitoring the rest of the curriculum to ensure that computing is being applied where appropriate.

The class teacher is responsible for writing the short-term plans with the possible Computing components of each lesson and for daily inclusion within mathematics, English and whole-school topics where appropriate.

The topics studied in Computing are planned to build on prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also plan progression into the scheme of work, so that the children are increasingly challenged as they progress through the school.

Teaching:

Throughout the school, the Computing curriculum falls into three main areas as detailed by the National Curriculum: Computer Science, Information Technology and Digital Literacy.

Objectives Early years:

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 and recording devices such as using Seesaw can support children to develop their communication skills.

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.

As part of a varied curriculum, Clarborough Primary School uses many tools, applications and programs which includes: Seesaw, Ivisualiser, Seeing AI and Clicker to support SEN; Scratch, Kodu, Microsoft packages; Code-a-pillar, Makey Makeys, Lego Wedo construction sets, Green Screen technology, Anki Cozmo robot and Bee-bots. It is the responsibility of all

staff and the Computing coordinator to follow updates in regards to technological changes over periods of time.

As part of Relationships Education from September 2020, pupils will be taught about online safety and harms. They will be taught what positive, healthy and respectful online relationships look like, the effects of their online actions on others and knowing how to recognise and display respectful behaviour online. All teachers should refer to the 'Teaching online safety in school' document as provided by the Department for Education, June 2019, for a breakdown of underpinning knowledge and which curriculum areas this part of Computing should be assigned to.

Organisation:

Teachers are supported in their teaching by a range of software, including iPad applications specifically arranged on staff and student iPads, which enables them to give pupils hands-on experience of each skill objective, and to assess skills learned. Teachers are then expected to extend pupils' use of these skills and their capability in computing through other subjects or a Computing-related project.

Each class in KS2 is allocated laptops and iPads and KS1 have access to iPads as well as all classes having access to: bee-bots, Lego Wedo constructions kits, Makey Makeys, Anki Cozmo, interactive whiteboards in each classroom and corridor areas and Apple TV in most classrooms. All items can be accessed from EYFS to year 6.

Homework/ involving wider community:

The school's website provides information and communication between the school, parents and the local community. School email addresses and ParentMail are used for communication between staff and parents, and samples of children's work and videos of activities can be shown to parents through the school newsletter and Seesaw. ParentMail ensures that all parents are updated with all relevant school information.

The school also manages an official 'Twitter' and 'Facebook' account where authorised members of the staff can upload videos and photographs of school activities for the benefit of the wider school community. This is monitored extensively and all media uploaded follows the school's policies regarding publication of student information.

Homework will be set by the class teacher for each year group, only where appropriate. Creative homework allows for children to independently choose to use Computing skills as part of their submission.

Resources:

The 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. Clarborough Primary School currently has:

- A range of resources are available in the Computing room which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential.
- Resources are suitably maintained and replenished when needed, which is overseen by the Computing Leader.
- An itemised list of all resources is shared with staff and kept up to date by the Computing Leader and bursar.
- Audits of school resources are conducted regularly by the Computing Leader, which informs bidding for budgets allocations.
- The Computing Leader keeps up-to-date with the latest technology resources and will make informed decisions about possible procurement of them through their own research.
- Suggestions for getting the very best out of the resources are made available to teaching and support staff by the Computing Leader during staff meetings and morning briefings.
- We believe that in addition to learning Computing as a subject in its own right, the potential of Computing to improve teaching and learning throughout the curriculum should be fully exploited. To meet this objective we have:

The school has a growing range of Computing resources. Each teacher in Ks2 has a class laptop. Each class has a trolley of laptops, an interactive whiteboard and iPads per classroom.

KS1 and EYFS also have access to a bank of iPads.

We use the Orchestrate-IT Solutions team to keep our equipment in good working order and liaise with them on a regular basis. Staff can report faults on a 'ticketing' system for the located technician to assist via a remote-connection or when they are based in the school for regular maintenance.

In order to keep the school computers virus-free, no software from home will be installed on school computers. Where teachers are transferring files between their home and school, they must have up-to-date virus protection software on their home computers. All computers are networked through the server, to enable access to the shared software on the server and to the Internet. A secure wireless network system is also in-place to enable tablet and other wireless device usage.

At Clarborough Primary School, our policy is to purchase hardware that is fully compatible with modern requirements. We wish to standardise software throughout the school to aid continuity and progression; however, selected programs are available for the different age groups and levels of ability. To ensure security of the system within the school, all existing and new computers are recorded by Orchestrate It on a computer database with the make, date of purchase, serial numbers and location recorded. Site licences for the software purchased are noted.

All staff have their own individual password protected login accounts for the school intranet. They also have an email address registered to the school and access to this via Office 365.

There are laptops and iPads stored in trolleys which have brakes fitted and keys to lock each unit. All staff are responsible for moving these trolleys to minimise damage. These trolleys are stored in a locked room or padlocked to the walls each evening and is the responsibility of the teacher to ensure that this is completed correctly.

Assessment:

The coordination and planning of the Computing curriculum are the responsibility of the subject leader, who also:

- Supports colleagues in their teaching, by keeping informed about current developments in Computing and by providing a strategic lead and direction for this subject. Demonstrations take place during scheduled staff meetings.
- Gives the Head Teacher an annual action plan which evaluates the strengths and weaknesses in Computing and indicates areas for further improvement

As good practitioners we are continually assessing our pupils at Clarborough Primary School.

All teachers are responsible for monitoring standards using the assessment procedures described in this policy. This is overseen by the Computing co-ordinator termly.

Teachers will assess the children's learning in a topic both at the start and end of a unit, using a KWL style activity, also highlighting attainment against descriptors after each objective is taught.

Furthermore, the assessment of the children's work, skills and knowledge will be measured against the following:

- Written work or work saved online.
- Questions and answers.
- Whole class and group discussions.
- Discussion between individual children and the teacher observation.
- Comparison with relevant level descriptors.
- Comparison with key stage programmes of study.

Monitoring and evaluation:

The subject leader will monitor teacher's plans to ensure that all of the Computing skills are being covered. Concrete or online folders will also be scrutinised to assess evidence of Computing, that is practical and differentiated. Each class has an online folder where they will save work that has been completed and also links to Seesaw folders should be used. This will also be monitored and used as a form of evidence.

Monitoring will be achieved through:

- Work scrutiny
- Learning walks
- Observations
- Pupil voice
- Teacher voice
- Reflective teacher feedback
- Learning environment monitoring

Conclusion:

Monitoring and review:

The Computing Co-ordinator is responsible for the production and implementation of the action plan. The Computing Co-ordinators is responsible for the curriculum mapping for the subject and for providing the detailed resources.