



Computing & ICT Policy

Review Date March 2021

Every Child, Every Chance, Every Day, Working Together



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Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Crabtree Farm we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Aims

The school's aims are to:

- 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 programmes of study for computing at Key Stage 1 and 2.
- Respond to new developments in technology
- Equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- Enhance and enrich learning in other areas of the curriculum using IT and computing.
- Develop the understanding of how to use computers and digital tools safely and responsibly.

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 information and communication technology.

Rationale

The school believes that IT, computer science and digital literacy:

- Are essential life skills necessary to fully participate in the modern digital world.



- Allows children to become creators of digital content rather than simply consumers of it.
- Provides access to a rich and varied source of information and content.
- Communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- Can motivate and enthuse pupils.
- Offers opportunities for communication and collaboration through group working both inside and outside of school.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Objectives

Early Years:

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play.

Computing is not just about computers. Early years learning environments should feature IT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

Exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for 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 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 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. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Resources if not classroom based are located in the computing suite. A service level agreement with Schools IT and Wolvern IT is currently in place to help support the subject leader to fulfil this role both in hardware & software. Computing network infrastructure and equipment has been sited so that:

- Every classroom has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- There is a computing suite with a full class set of desktops.
- There are 90 iPads for the children to use.
- Internet access is available in all classrooms.
- Each teacher plans lesson for teaching computing as a discrete subject. This may be taught as a block of lessons but is equivalent to 1 hour per week.
- Each class has an allocated weekly slot to use iPads as part of computing lessons and / or cross-curricular use.
- EYFS have a bank of four desktops and 10 iPads for the children to use.
- The school has a computing technician who is scheduled to be in school each Wednesday morning.

Planning

Teachers' planning is differentiated to meet the range of needs in any class including those children who may need extra support, those who are in line with average expectations and those working above average expectations for children of their age. A wide range of styles are employed to ensure all children are sufficiently challenged:

- Children may be required to work individually, in pairs or in small groups according to the nature or activity of the task.
- Different pace of working.
- Different groupings of children - groupings may be based on ability either same ability or mixed ability.

- Different levels of input and support.
- Different outcomes expected.

The school makes use of iCompute for Primary schools - a whole-school scheme of work for Year 1 to Year 6 pupils. iCompute fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing.

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include Gifted and Talented children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effective and meet their individual needs.

Assessment and record keeping

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term.

Assessment should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved. Assessment can be broken down:

- Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.
- Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps.

Monitoring and evaluation

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring cycle. This may be through lesson observations, pupil discussion and evaluating pupil work.

Pupils with Special Educational Needs (SEN)

We believe that all children have the right to access IT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the computing curriculum for some pupils.

We teach IT and computing to all children, whatever their ability. Computing forms part of the National Curriculum to provide a broad and balanced education for all children. Through the teaching of computing we provide opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs. Where appropriate IT can be used to support SEN children on a one to one basis where children receive additional support.

Equal opportunities

We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the equal opportunities policy. Resources for SEN children and gifted and talented children will be made available to support and challenge appropriately.

Internet Safety and e-safety

Internet access is planned to enrich and extend learning activities. The school has acknowledged the need to ensure that all pupils are responsible and safe users of the internet and other communication technologies. Although the school offers a safe online environment through filtered internet access we recognise the importance of teaching our children about online safety and their responsibilities when using communication technology. We have regular age appropriate e-safety assemblies which address current topics and support children to keep safe when using technology both in and out of school.

Our separate e-safety policy recognises the commitment of our school to e-safety and acknowledges its part in the school's overall safeguarding policies and procedures. It shows our commitment to meeting the requirement to keep pupils safe when using technology.

Roles & responsibilities

Senior Leadership

The overall responsibility for the use of ICT rests with the senior leadership of a school. The headteacher, in consultation with staff:

- determines the ways ICT should support, enrich and extend the curriculum;
- decides the provision and allocation of resources;
- decides ways in which developments can be assessed, and records maintained;
- ensures that ICT is used in a way to achieve the aims and objectives of the school;
- ensures that there is a Computing & ICT policy, and identifies a Computing & ICT subject leader.

The role of the subject leader

There is a computing subject leader who is responsible for the implementation of the computing policy across the school. Their role is to:

- offer help and support to all members of staff in their teaching, planning and assessment of computing.
- provide colleagues opportunities to observe good practice in the teaching of computing.
- maintain resources and advise staff on the use of digital tools, technologies and resources.
- monitor classroom teaching or planning following the schools monitoring programme.
- monitor the children's progression in computing, looking at examples of work of different abilities.
- manage the computing budget.
- keep up-to-date with new technological developments and communicate information and developments with colleagues.
- lead staff training on new initiatives.
- attend appropriate in-service training.
- have enthusiasm for computing and encourage staff to share this enthusiasm.
- keep parents and governors informed on the implementation of computing in the school.
- liaise with all members of staff on how to reach and improve on agreed targets.
- help staff to use assessment to inform future planning.

The role of other subject leaders

There is a clear distinction between teaching and learning in computing and teaching and learning with ICT. Subject leaders should identify where ICT should be used in their subject schemes of work. This might involve the use of short dedicated programs that support specific learning objectives or involve children using a specific application which they have been taught how to use as part of their ICT study and are applying those skills within the context of another curriculum subject.

Subject leaders work in partnership with the computing & ICT subject leader to ensure all National Curriculum statutory requirements are being met with regard to the use of computing and ICT within curriculum subjects.

The role of the class teacher

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.

They will plan and deliver the requirements of the National Curriculum for computing to the best of their ability. We set high expectations for our pupils and provide opportunities for all to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds.

The class teacher's role is vital in the development of computing throughout the school and will ensure continued progression in learning and understanding, and create effective learning environments.

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.
- set suitable targets for learning as outlined in the inclusion policy.
- maintain up to date assessment records.

Staff training

The computing subject leader will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests throughout the year.

Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the subject leader.

Teachers will be encouraged to use IT and computing to produce plans, reports, communications and teaching resources.

Health and safety

We will operate all ICT equipment in compliance with Health & Safety requirements. Children will also be made aware of the correct way to sit when using the computer and the need to take regular breaks if they are to spend any length of time on computers. Computer Room Rules are also on display within the ICT suite for reference.

The school has an alarm system installed throughout. Each computer system has individual security against access to the management system. EMBC manages the intranet using 'Surf Control' for security and safety. The files and network system are backed up regularly. The virus checker is updated regularly.

Security

We take security very seriously. As such:

- the computing technician will be responsible for regularly updating anti-virus software.
- use of IT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools 'acceptable use policy'.
- parents will be made aware of the 'acceptable use policy' at school entry and key stage 2.
- all pupils and parents will be aware of the school rules for responsible use of IT and computing and the internet and will understand the consequence of any misuse.
- the agreed rules for safe and responsible use of IT and computing and the internet will be displayed in all computing areas.

Management Information Systems (MIS)

ICT enables efficient and effective access to and storage of data for the school's leadership team, teachers and administrative staff.

The school complies with Local Authority requirements for the management of information in schools. We currently use SIMs which operates on the school's administrative network and is supported by the Local Authority - EMBC.

Only teaching staff have access to 'S' section of the server which is accessed using a password. Only trained & designated members of staff have authority and access rights to input or alter the data.

The school has defined roles & responsibilities to ensure data is well maintained, secure and that appropriate access is properly managed with appropriate training provided.

School liaison, transfer and transition

The school is connected to the EMBC intranet which enables the transfer of information electronically.

Email is now used frequently to liaise with the Local Authority, governing body, other schools and, where possible, parents and carers.

Future developments regarding our school management information system will enable the transfer electronically of data to aid transfer and transition to or between or within schools.

Cross curricular links

As a staff we are all aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding. Our school provides pupils with opportunities to enrich and deepen learning using cross-curricular approaches.

Home school links

Parents/carers are encouraged to support the implementation of IT and computing where possible by encouraging use of IT and computing skills at home for pleasure, through home-learning tasks and use of the school website. Parents/carers will be made aware of issues surrounding e-safety and encouraged to promote this at home.

Children are given the option to complete some homework tasks, when appropriate, using ICT out of school. Teachers are sensitive to the fact that children may not have access to ICT or may not wish to use it to complete tasks out of school. Any work brought into school must be scanned for viruses.

We have a school website which will promote the school's achievements as well as providing information and communication between the school, parents/carers and the local community.

Appropriate legislation, including copyright and data protection

All software loaded on school computer systems must have been agreed with the designated person in the school.

All our software is used in strict accordance with the licence agreement.

We don't allow personal software to be loaded onto school computers.