Winterton Junior School Computing Policy

Introduction

The 2014 national curriculum introduces a new subject, computing, which replaces ICT. This represents continuity and change, challenge and opportunity. It gives schools the chance to review and enhance current approaches in order to provide an even more exciting and rigorous curriculum that addresses the challenges and opportunities offered by the technologically rich world in which we live. Computing Technology prepares pupils to participate in a rapidly changing world in which work and other activities are increasingly transformed by access to varied and developing technology .We recognise that it is an important tool in both the society we live in and in the process of teaching and learning.

Computing is concerned with how computers and computer systems work, and how they are designed and programmed. Pupils studying computing will gain an understanding of computational systems of all kinds, whether or not they include computers. Computational thinking provides insights into many areas of the curriculum, and influences work at the cutting edge of a wide range of disciplines.

The Acceptable Use of IT Policy, Safeguarding and the E Safety Policies should also be read in conjunction with this policy.

The Nature of Computing

The new National Curriculum presents the subject as one lens through which pupils can understand the world. There is a focus on computational thinking and creativity, as well as opportunities for creative work in programming and digital media.

The introduction makes clear the three aspects of the computing curriculum: computer science (CS), information technology (IT) and digital literacy (DL).

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 standard suitable for the future workplace and as active participants in a digital world. Our vision is for all teachers and learners in our school to become confident users of IT so that they can develop the skills, knowledge and understanding which enable them to use appropriate resources effectively as powerful tools for teaching & learning.

Computing in School

The National Curriculum for Computing has four main aims to ensure that all pupils:

• Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.

• 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.

Glossary of Terms Abstraction - Only focussing on the details relevant to the task, in computing this maybe by using a database to handle data. Logic - The non-arithmetic operations performed by a computer, such as sorting, comparing, and matching, that involve yes-no decisions. This might be completed using programs such as Excel. Algorithms - The step-by-step procedure for a machine to complete a task, for example the instructions put into a bee-bot to guide it through a maze. Data Representation - The way in which information is presented. In its simplest form this could be representing a data set as a graph. However it is also using the appropriate software for the task.

At Winterton Junior School we use Computing and Technology as a tool for learning, embedding the skills the children need to learn and experience into their everyday curriculum and exploration of our school themes and topics. The children will learn to use and apply their skills into a real context, for example researching on the internet and attaching their own photography to their work. We aim to equip children to think creativity and use computing as a tool, to change, explore and develop their own knowledge. The children will also be taught about the importance of technology safety and how to use it respectfully and responsibly. Also they will be taught what to do if they are concerned or worried about online content, safety or privacy.

Entitlement

The new National Curriculum states that pupils should be taught to:

	Key Stage 1	Key Stage 2
Computer Science	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	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 Appreciate how [search] results are selected and ranked
Information Technology	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Use search technologies effectively 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
Digital Literacy	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	Understand the opportunities [networks] offer for communication and collaboration Be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Objectives

In order to fulfil the above aims it is necessary for us to ensure:

- a continuity of experience throughout the school both within and among year groups
- the systematic progression through key stage 2
- that all children have access to a range of IT resources
- that IT experiences are focussed to enhance learning
- that cross curricular links are exploited where appropriate
- that children's experiences are monitored and evaluated
- that resources are used to their full extent
- that resources and equipment are kept up to date as much as possible
- that staff skills and knowledge are kept up to date

Curriculum Development & Organisation

During a term, a class will work on completing one or two units of work based on the National Curriculum objectives for their year group. The National Curriculum, along with the Rising Stars scheme, is used to form the medium term plans for Computing. Adaptations are made to ensure the plan is progressive in developing pupil capability. As well as a computer suite, additional ipads have also been deployed to upper and lower school to allow for increased access. These devices encourage research, and allow for the creative use of IT in subjects. Interactive touch screens are located in all of the classrooms.

Teaching & Learning

At Winterton Junior School, computing will be taught both as a discrete subject and in a cross-curricular way when the opportunity presents itself. A cross curricular approach to planning is used throughout the curriculum and links into the termly themes (where possible) to make learning engaging and to give real life contexts for learning. Children are provided with opportunities to apply computing skills in other subjects.

The Computer Suite and the ipads distributed around the school will be used to help pupils access the Computing curriculum, along with a range of other resources.

The Computing subject leader and the Headteacher will continually monitor the resources required to deliver the Computing element of the new National Curriculum. Planning is differentiated to meet the range of needs in any class including those children who may need extra support, those who are developing in line with age related expectations and those working securely 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 (same ability or mixed ability).
- Different levels of input and support
- Different outcomes expected

The Computing subject leader will review plans and examples of children's work to ensure a range of teaching styles are employed to cater for all needs and promote the development of IT capability. E-Safety will be a thread of most IT work, in or out of computing lessons.

Equal Opportunities

The National Curriculum states that, "Lessons should be planned to ensure that there are no barriers to every pupil achieving."

It is our policy to ensure this by:

- ensuring all children follow the scheme of work for Computing
- keeping a record of children's work
- providing curriculum materials and software which are in no way class, gender or racially prejudice or biased

Assessment

Computing is assessed both formatively and summatively. Formative assessment occurs on a lesson by lesson basis based on the lesson objectives. These are conducted informally by the teacher and are used to inform future planning. Teachers and support staff at Winterton Junior School constantly assess children's progress in

all curriculum areas and use this to inform their teaching. By the end of the Key Stage, pupils are expected to know, apply and understand the matters, skills and processes outlined in the National Curriculum Computing programme of study.
Assessment of children's work in Computing is on-going and tracked using Class track. Achievement is reported to parents during the academic year. Children's work is saved to the server for reference throughout the year.

Inclusion
We recognise IT and Computing offers particular opportunities for pupils with special educational needs and disability, gifted and/or talented children and /or children with English as an additional language for example. IT can cater for the variety of learning styles which a class of children may possess.
Using IT can:

- increase access to the curriculum
- raise levels of motivation and self esteem
- improve the accuracy and presentation of work
- address individual needs
- Support children in keeping themselves safe

We aim to maximise the use and benefits of IT as one of many resources to enable all pupils to achieve their full potential. Opportunities are provided for children to apply their skills in a range of different contexts throughout all curriculum areas.

Roles & responsibilities
Senior Leadership
The overall responsibility for the use of IT rests with the senior management of a school. The Head, in consultation with staff:

- determines the ways IT 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 IT is used in a way to achieve the aims and objectives of the school
- Ensures that there is a Computing policy, and identifies a Computing Subject Leader as well as an e-Safety Officer
- Ensures that e-Safety messages are kept current and regular

Computing Subject Leader
There is a designated Computing Subject Leader to oversee the planning and delivery within the school.
The Computing Subject Leader will be responsible for:

- raising standards in Computing as a national curriculum subject
- facilitating the use of IT across the curriculum in collaboration with all subject leaders
- providing or organising training to keep staff skills and knowledge up to date
- advising colleagues about effective teaching strategies, managing equipment and purchasing resources
- monitoring the delivery of the curriculum and reporting to the headteacher on the current status of the subject
- Advising on new, recognised e-Safety dangers

The Teacher
It remains the responsibility of the teacher to plan and teach appropriate Computing activities and assist the subject leader in the monitoring and recording of pupil progress in.

Monitoring
Monitoring Computing will enable the subject leader to gain an overview of teaching and learning throughout the school. This will assist the school in the self-evaluation process identifying areas of strength as well as those for development. In monitoring of the quality of Computing teaching and learning the subject leader will:

- Scrutinise plans to ensure full coverage of curriculum requirements
- Analyse children's work
- Observe Computing teaching and learning in the classroom
- Hold discussions with teachers
- Analyse assessment data

- Provide staff training through staff meetings and INSET training days on issues that arise from monitoring

Health & Safety

We will operate all IT 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 Rules are also on display in all classrooms for reference along with specific rules for the use of internet and e-mail. Each computer system has individual security against access to the management system. The files and network system are backed up regularly. The virus checker is updated regularly. Teachers ensure that pupils are taught and reminded, of the rules associated with appropriate use of equipment. A technician visits the school weekly and repairs any items which are thought to be faulty. The school's touch screens are located in classrooms and in the Computer suite.

All teachers have a laptop and ipad to use in school and at home. Teaching and learning staff are instructed to use encrypted memory sticks for any information that includes personal details of pupils.

E-Safety Policy

At Winterton Junior School we believe that all children should be taught to use the Internet efficiently and safely, and to develop a responsible and mature approach to accessing and interpreting information. The Internet provides many benefits to both staff and children, for example:

• Access to world-wide educational resources.
• Access to experts in many fields.
• Access to learning wherever and whenever convenient.

There is a requirement in all schools to provide as safe an Internet environment as possible and to teach children to be aware of and respond responsibly to any risk. There are three core elements for our school to consider in relation to e-safety:

• Technology and Infrastructure
• Policy and Procedure
• Education and Training

Technology and Infrastructure

Internet filtering is a key service and the school has adequate approved filtering, anti-virus, anti-spam ware and firewall solutions installed on the network. Winterton Junior School will therefore;

• Maintain connection to a filtered broadband.
• Have additional user-level filtering in place.
• Ensures network health through the use of appropriate anti-virus software and regular technical checks.
• Ensure technical staff and administrators are up-to-date with services and policies.
• Never allow children to access internet logs.
• Use individual network logins for staff.

<u>Management Information Systems (MIS)</u>

IT enables efficient and effective access to and storage of data for the school's management team, teachers and administrative staff. E-Safety protocols are adhered to e.g. passwords and back up. The school has defined roles and responsibilities to ensure data is maintained, secure and that appropriate access is properly managed with appropriate training provided. Whole school assessment in all subjects is also stored electronically using the O Track/Classtrack system.

Policy and Procedures

Due to the international scale and nature of the information available via the Internet, it is not always possible to guarantee that unsuitable material will never appear. Awareness of the risks, having the appropriate systems in place and supervising children in their use of the Internet are important considerations in reducing risk. Therefore Winterton Junior School will;

• Supervise children's use of the internet at all times, and exercise extra vigilance on occasions when they have more flexible access, either by physical staff presence or use of a filtering and electronic monitoring system.
• Use an appropriate and approved filtering system which blocks harmful and inappropriate sites. • Exercise extra vigilance during raw image searches.
• Inform children that Internet use is monitored.
• Inform all users that they must report any failure of the filtering systems to the system administrator.

• Require children and staff to individually sign an acceptable use agreement form which is fully explained to them.
• Make the 'rules of appropriate use' clear to all users, at an appropriate level, and what sanctions will result from misuse.
• Keep a record of any bullying or inappropriate behaviour for evidence in line with the school Behaviour/e-Safety Policy.
• Ensure the designated Child Protection /E Safety Officer has appropriate training in e-safety.
• Ensure parents/carers provide consent for their child to use the Internet, as well as other IT.
• Make information on reporting offensive materials, abuse, bullying etc. available to children, parents, carers and staff.
• Immediately refer any material we suspect is illegal to the appropriate authorities.

Education and Training

Even with all safety procedures in place, children will still occasionally download inappropriate material. Children and staff need to know how to respond responsibly, how to become 'Internet Wise'; to STOP and THINK before you CLICK. Winterton Junior School will therefore;

• Foster a 'No Blame' environment that encourages children to tell an adult immediately they encounter any material they feel uncomfortable with.
• Ensure children and staff know what to do if there is a cyber-bullying incident.
• Ensure all children know how to report abuse.
• Have an e-Safety education programme throughout Key Stage 2, which is part of the Computing and wider curriculum. Through this children are taught a range of skills and behaviours relevant to their age and experience.
• Ensure, when copying materials form the web, children and staff, understand issues of plagiarism and copyright.
• Offer e-Safety advice and guidance for parents / carers.

Winterton Junior School Internet Safety Rules

These rules help us to stay safe on the internet and when using computers and other mobile technology.

- We ask permission before using the internet.
- We try to check the reliability of information.
- We only use websites or apps our teachers have chosen for us.
- We tell an adult if we see anything we are uncomfortable with- do not delete.
- We will not look at, move or delete other people's files without their permission.
- We only e-mail or message people our teachers have approved.
- We only send emails and messages that are polite and friendly.
- We never give out any personal information (including photographs) or passwords – including 'pop ups.'
- We never arrange to meet anyone we don't know.
- We do not open files or emails sent by anyone we don't know.
- We do not use internet chat rooms.
- I will not respond to or add people I do not know personally.
- I will not use mobile phones in school; I will leave mine in the office if I bring it to school.

WINTERTON JUNIOR SCHOOL ACCEPTABLE USE AGREEMENT
(Pupils) 2016

Note: All Internet and email activity is subject to monitoring

- I Promise – to only use the school ICT for schoolwork that the teacher has asked me to do.
- I Promise – not to look for or show other people things that may be upsetting.
- I Promise – to show respect for the work that other people have done.
- I will not – use other people's work or pictures without permission to do so.
- I will not – damage the IT equipment, if I accidentally damage something I will tell my teacher.
- I will not – share passwords with anybody. If I forget my password I will let my teacher know.
- I will not – use other people's usernames or passwords.
- I will not – share personal information online with anyone.
- I will not – download anything from the Internet unless my teacher has asked me to.
- I will – let my teacher know if anybody asks me for personal information.
- I will – let my teacher know if anybody says or does anything to me that is hurtful or upsets me.
- I will – be respectful to everybody online; I will treat everybody the way that I want to be treated.
- I understand – that some people on the Internet are not who they say they are, and some people can be nasty. I will tell my teacher if I am ever worried in school or my parents/carers if I am at home.
- I understand – if I break the above rules there will be consequences of my actions and my parents/carers will be told.

Review

The Headteacher and staff will review this policy in accordance with the development priorities stated in the School's Development Plan. Any suggested amendments will be presented to the governing body for discussion. This policy will be reviewed every three years or in the light of changes to legal requirements.

Computing Policy written by Gemaine Cooney: September 2016
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