

**ICT and Computing Policy**

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**Introduction**

The use of information and communication technology is an integral part of the national curriculum, an essential resource to support teaching and learning and is a key skill for everyday life; therefore it is vital we provide our pupils with the tools to understand and use digital equipment and information around them. At Rattlesden Primary School we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.

This policy aims to define ICT and computing, explain the ICT and computing curriculum and the terms used within it and to recognise how the school intends to provide an effective and progressive learning experience.

**Rationale**

Our school believes that ICT and computing:

* Gives pupils immediate access to a rich source of materials
* Can present information in new ways
* Can motivate and enthuse pupils

**Aim**

We aim to meet the national curriculum requirements for ICT and computing by:

* Providing a relevant, challenging and enjoyable ICT and computing curriculum for all pupils
* Using ICT and computing as a tool to enhance learning throughout the curriculum
* Responding to new developments in technology
* Equipping pupils with the confidence and capability to use ICT and computing throughout their later life

**Definitions**

**ICT** covers the wide range of resources and devices which facilitates the sharing and communications of information.

This includes:

* hardware (PCs, laptops, tablets, ereaders, Chromebooks, smart phones, interactive whiteboards, MP3 players, digital cameras, video cameras, DVD players, printers, scanners, external hardrives and microphones);
* software (the programs we use),
* network and server systems (electronic storage and access to it)
* learning platform (set of online services used to support teachers, students and parents)
* the internet and how we connect to it (including wifi and mobile services) and
* The World Wide Web (a way we can access the internet).
* Other internet technologies (learning platforms, virtual learning environments, email and instant messaging, social networking sites, blogs, podcasting, music downloads, video broadcasting and gaming)

**ICT and Computing** is the term used to describe the element of the National Curriculum where we learn to understand how to use ICT beyond school and about computer networks, including services that the internet can provide to communicate and collaborate with others.

The core elements we teach in our ICT and Computing curriculum are:

* Algorithms & Programming and development: *Creating a computer programme*
* Data and data representation: *Handling data and spreadsheets*
* Hardware and processing: *Understanding computer networks*
* Communication and networks: *research using the world wide web, communicating online, e-safety and what the internet is.*
* Information Technology; *network skills, mouse skills and use of programmes to present information.*

**ICT as a Teaching Tool**

At Rattlesden Primary Academy, ICT and computing is used to aid teaching in a variety of ways including:

* Presentation (IWB)
* Research
* Lesson planning
* Resource preparation
* Assessment and monitoring
* Communication.

**National Curriculum 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 to ‘paint’ on the whiteboard or programme a toy. Recording devices can support children to develop their communication skills.

**Key Stage 1**

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 (**understand that instructions/commands have to follow a set order for the sequence to work)**
* Write and test simple programs **(write a sequence to control a devise and test it works)**
* Use logical reasoning to predict the behaviour of simple programs **(describe what they think will happen when their sequence is run)**
* Organise, store, manipulate and retrieve data in a range of digital formats **(e.g. through cameras, microphones, saving and opening work and images)**
* Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

**Key Stage 2**

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 **(write sequences that control digital devises to achieve a particular goal, breaking up into smaller chunks and testing it before moving on)**
* 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 **(using all the elements needed in a program to write sequences to get a devise to achieve its goal)**
* Use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs **(test sequences and make corrections before moving on)**
* 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 **(communicate using the internet, understand how they can use the internet for a variety of purposes, e.g. gaming, communication, research, understand that the World Wide Web is one way to access the internet and understand how computer networks work)**
* 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 **(safety and how search engines adapt our searches from previous searches we have done)**

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 **(using a variety of software and resources to complete tasks and present information within the ICT and computing lessons and across the curriculum, e.g. cameras, microphones, PowerPoint, Excel, internet, www, sensors etc.)**

**ICT and Computing Curriculum Intent**

**Early Years**

* Become familiar with using electronic and digital devices; use simple programs and apps with support and become familiar with using a keyboard and mouse.

**Key Stage 1**

* Begin to develop the knowledge and skills to use our computer system with a growing independence, including logging on and off, opening, closing, printing and using simple programs and apps and digital devices.
* Increase their familiarity, speed and accuracy when using the keyboard and mouse.
* Use programmable toys and unplugged activities to achieve specific goals.
* Have an understanding of what we use the internet for and access it with support; being able to talk about some of the risks and rules when using it.

**Lower Key Stage 2**

* Show an increased understanding and independence when using our computer system, including finding, opening, saving and closing files and documents. Use some features and tools in a variety of programs, apps and digital devices to present information.
* Use simple block programming both in plugged and unplugged activities to achieve specific goals.
* Understand some of the different uses of the internet, including online devices, and use the World Wide Web with growing confidence and independence to support their learning with some support.
* Show an awareness of how they can use the internet safely, responsibly and respectively.

**Upper Key Stage 2**

* Independently make choices about what programs or apps to use to achieve the desired outcome and use the features within these with confidence to present information.
* Understand our computer system in order to navigate their way around it, including organising their folders and files.
* Use block programming both in plugged and unplugged activities to achieve specific goals, showing they can use variables.
* Have a deeper understanding of what the internet is and use the World Wide Web to research and support their learning independently.
* Explain how they can use the internet safely, responsibility and respectively, drawing on unacceptable and acceptable behaviour and awareness of online relationships and digital footprints.

**Resources and access**

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible PC system by investing in resources that will effectively deliver the objectives in the national curriculum and support the use of ICT and computing across the school. A service agreement with William de Ferrers Schools’ Tech support has been signed up for IT support.

Teachers are required to inform the office (face to face or via the record book in the office) of any faults as soon as they are noticed. It is also the responsibility of teachers to ensure that the laptop trolleys are plugged in and locked and the class set of ipads are charged after use, stored in the HT’s office overnight and kept tidy.

ICT and computing infrastructure and equipment has been sited so that:

* Every classroom has a laptop connected to the school network and curriculum server and an interactive whiteboard with sound and DVD.
* Hall: overhead projector, screen and sound system.
* There are 2 PCs in the office, connected to the administration server.
* Every classroom has a CD player, digital camera, visuliser and teacher iPad.
* There are 9 laptops (stored in Maple Class) with internet access available to use in classrooms for specific ICT and computing teaching and cross-curriculum use.
* The photocopier in the reprographics room is the central printer used by all school PCs and laptops.
* A class set of ipads: 30 (stored in HT’s office room)
* A class set of Chromebooks: 32 (stored in charging unit in hall cupboard)
* Each class from y1 – y6 has an allocated slot across the week for teaching of specific ICT and computing skills.
* Other digital devises: headphones and external mice on laptop trolley.
* Routers in photocopying room, Upper Beech and Lower Beech and server in staff room.
* There are a number of wireless points located throughout the school.

**Curriculum Resources**

Software, including apps for ipads and Chromebooks as well as built in software are installed and requests can be made to the ICT and computing lead for new software to be installed, which can be done through Apple School Manager or via wdf on laptops and Chromebooks. A list of resources, including online resources, such as coding programmes, linked to each element of the curriculum can be found in the ICT and Computing folder on the shared drive

**Planning**

Teachers deliver the key elements of an ICT and computing curriculum as set out in the progression document (found in the ICT and Computing folder on the teacher drive), which will allow for clear progression, either as discrete ICT and computing lessons or through cross curricular links.

Teachers make use of opportunities of topics, trips and visits wherever possible to extend and enhance learning outside the classroom.

The computing and ICT lead will monitor that all aspects of the curriculum by the end of the key stage have been covered and ensure there is progression throughout each key stage.

E-safety has been closely planned with the PSHE lead to ensure the two complement each other and content is not repeated. Teachers follow the long-term e-safety plan to ensure all aspects are taught each year, each half term having a clear focus. Wherever possible and where links can be made, this should eb taught alongside the ICT and Computing unit for that half term.

**Inclusion**

At Rattlesden we plan to provide for all pupils to achieve, including boys and girls, higher achieving pupils, gifted & talented pupils, those with SEN, pupils with disabilities, pupils from all social and cultural backgrounds, children who are in care and those subject to safeguarding, pupils from different ethnic groups and those from diverse linguistic backgrounds.

ICT and computing will be used as a resource to support SEN pupils as well as extend more able and gifted and talented pupils.

**Assessment**

Assessment of ICT and Computing should be in line with the school’s *Assessment Policy* and staff should make themselves familiar with this. It is the responsibility of the class teacher to ensure they are using an effective assessment system to identify the level the children in their class are working at and to provide next steps to ensure progression. It is the responsibility of the class teacher to report their assessment to parents through the end of year reports. It is the responsibility of the ICT and computing to support staff with the assessment of ICT and computing.

Class teachers will keep class books for the subject leader to monitor to ensure both coverage and progression.

**Health and safety**

The school is aware of the health and safety issues involved in children’s use of ICT and computing.

* All electrical appliances in school are tested accordingly. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school by, for example, people running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people.
* All staff should visually check electrical equipment before they use it and take any damaged equipment out of use.
* Damaged equipment should then be reported to the bursar or head teacher who will arrange for the disposal or repair.

**Security**

* Anti-virus software is installed on our server and regularly updated by the school (Symantic antivirus)
* Use of ICT and computing will be in line with the school’s e-safety, acceptable use policy and guidance on use of social networking sites and smart phones and an acceptable use of ICT agreement. All staff must familiarise themselves with these and understand the consequences for misuse and sign to say they have done this.
* In addition parents will be asked to sign a permission form which is used to compile class permission lists for use of photographs on websites and for web
* All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet, and will understand the consequence of any misuse of the internet and will understand the consequences of any misuse.
* All pupils will sign a copy of the schools internet rules and acceptable use agreement.
* The agreed rules for safe and responsible use of ICT and computing and the internet (SMART) will be displayed in all classrooms and made familiar to children.
* Use of the internet will be closely supervised by staff.
* It is essential that internet use is closely supervised in the home environment as well.
* All staff and pupils have individual user names and standard password for access to the school network, allowing their own electronic file space to save documents. Individuals can only log on to the network using their own username and password (including Chromebooks).
* Passwords and Usernames are provided and managed by the ICT and computing lead and designated TA for laptops and school admin for Chromebooks.
* Apps on ipads can only be added or removed remotely by ICT lead or IT provider (WDF) using our school’s Apple Manager and Mosyles Manager accounts. Paid ones must only be bought if permission gained from the headteacher and school admin are notified.
* Apps on Chromebooks can be installed by ICT lead or WDF remotely.
* Internet filters have been installed to the highest levels on all laptops and PCs routinely used by the children, to screen the majority of unsuitable material.
* Backup of data is done daily (overnight) remotely through our IT provider (WDF).