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, outline the intent of our ICT and computing curriculum and the terms used within it; to recognise how the school implements an effective and progressive learning experience and explains how the impact is measured.

Intent

Through our computing curriculum at Rattlesden primary Academy, we aim to give our pupils the life-skills that will enable them to embrace and utilise new technology in a socially responsible, positive and safe way in order to flourish in an ever-changing digital world. We want our pupils to be responsible digital citizens and be able to thrive in the 21st century workplace and to know the career opportunities that will be open to them if they study computing.

Through a fun, engaging, challenging and high-quality computing education, we want our pupils to be motivated and become confident and competent users of a range of computing technologies. Our intention is that computing also supports children's creativity, resilience, critical thinking skills and cross-curricular learning to engage children and enrich their experiences in school and to ensure that our curriculum is accessible to every child.

Our computing curriculum will enable our pupils to gain key knowledge and skills in the three main areas of computing: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully).

By the time they leave Rattlesden, we want all our pupils to be flexible, creative, responsible and confident users of technology, who are able to choose the best tool to fulfil the task set by teachers.

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 three main strands of computing are: **computer science** (coding and programming); **information technology** (use ICT to present ideas, for example: writing, presentations, photos, films, data and art as well as finding out about computer networks); and **digital literacy** (the safe use of ICT including eth internet).

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.

ICT and Computing Curriculum

Early Years
Our children in **Early Years**, will be exposed to the understanding of internet safety as they explore the world around them and how technology is an everyday part of their learning and understanding of the world.

Key Stage 1
National Curriculum Objectives:
By the end of key stage 1 pupils should be taught to:
- Understand what <u>algorithms</u> are, how they are implemented as programs on digital devices, and that programs execute by following a <u>sequence</u> 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 of instructions to write a program, test it works and make changes if required)**

- Use logical reasoning to predict the behaviour of simple programs **(predict the behaviour of simple programs)**

- Organise, store, manipulate and retrieve data in a range of digital formats **(use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content They will be shown how to as well as recognise common uses of information technology beyond school)**

- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school **(They will be taught to 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
By the end of key stage 2 pupils should be taught to:
- Design and write programs that accomplish specific goals, including <u>controlling</u> or <u>simulating</u> physical systems; solve problems by <u>decomposing</u> them into smaller parts **(write sequences that control digital devises to achieve a particular goal, breaking up into smaller chunks and testing and correcting it before moving on)**

- Use <u>sequence</u>, <u>selection</u>, and <u>repetition</u> in <u>programs</u>; work with <u>variables</u> and various forms of <u>input</u> and <u>output</u>; 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 a specific goal)**

- Use logical reasoning to explain how a simple <u>algorithm </u>works and to detect and correct errors in <u>algorithms</u> and programs **(testing, explaining errors in programs and correcting them 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, the internet, www, sensors etc.)**

- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Resources and access

In order give pupils immediate access to a rich source of materials, 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 Paretron has been signed up for IT support.

Teachers are required to inform Paretron by opening a ticket, via the link on their desktop. It is also the responsibility of teachers to ensure that the Chromebooks are returned to the trolley, which is plugged in and locked each night 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 teacher has a laptop connected to the school network and curriculum server and an Smartboard with sound.
- 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 and scanner 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 stored in hall cupboard and external mice on laptop trolley.
- Routers in photocopying room, Silver Birch 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 Parketron 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 Google Drive under 'School Documents'.

Implementation

At Rattlesden Primary Academy, computing is planned and taught using a blocked curriculum approach. This ensures children are able to develop depth in their knowledge and skills over the duration of each of their computing topics and to ensure progression in their knowledge and skills throughout their time at Rattlesden, which is mapped using our progression document. Teachers use the 'EdTech' scheme of work, developed by the National Centre for Computing Education (NCCE), as a starting point for their planning of their computing lessons, which are often richly linked to engaging contexts in other subjects and topics. Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps they have been taught. If internet safety cannot be linked to the planned units, additional internet safety lessons will be taught alongside to ensure coverage.   These may be as part of the computing or PSHE curriculum, depending on the focus.

The implementation of our curriculum ensures a balanced coverage of the three main strands of computing: **computer science**, **information technology** and **digital literacy**. The children will have experiences of all three strands in each year group, but the subject knowledge imparted becomes increasingly specific and in depth, with more complex skills being taught, ensuring that learning is built upon and children can independently make choices about how to achieve specific tasks.

We have a class set of ipads and Chromebooks to ensure that all year groups have the opportunity to use a range of devices, apps and software for many purposes across the wider curriculum, as well as in discrete computing lessons. The computing curriculum is also enhanced by class visits to BT Adastral Park for sessions led by specialists, and enabling the children access to specialist equipment.

There is much emphasis placed on the teaching of online safety at Rattlesden to ensure children become good digital citizens both within our local community and globally as they become adults. We ensure, through our online safety curriculum that all 4 C risks from KCSIE (content, contact, conduct and contract) and the key areas from the DfE guidance, 'Teaching Online Safety in Schools', are covered. By the time the children leave our school, we aim for them to know:

- What positive, healthy and respectful online relationships look like
- The effects of their online actions on others
- How to recognise and display respectful behaviour online
- How to use technology safely, responsibly, respectfully and securely
- Where to go for help and support when they have concerns about content or contact on the internet

(Teaching Online Safety in Schools, DFE, Jan, 2023)

 It is taught through our computing and PSHE curriculum, mapped using 'Teaching for a Connected World' to ensure coverage and progression in each key area of online reputation, privacy and security, managing online information, copyright and ownership, health, well-being and lifestyle, self-image and identity and online relationships and bullying. Our online safety curriculum 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 online safety plan to ensure all aspects are taught each year and that each half term has a clear focus. We use the UK Safer Internet resource, 'ProjectEVOLVE' to support our online safety teaching. Wherever possible and where links can be made, this should be taught alongside the ICT and Computing unit for that half term.

The school website has a page on online safety, where up-to-date and relevant information to support parents with the safe use of technology at home is posted and updated. We also communicate and share this information with parents via email and through head teacher letters.

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 challenge more able and gifted and talented pupils.

Assessment

Assessment of ICT and Computing is 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 (Bitdefender antivirus)
- Use of ICT and computing will be in line with the school's online safety, GDPR, code of conduct, acceptable use of social networking sites policy and smart phones policies 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 the school website and Twitter account.
- 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 directly supervised by staff, including use of ipads during breakfast and afterschool club.
- Internet usage can be monitored through individual log in information.
- 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.
- To access Google Suite and to use the Chromebooks, each member of staff and pupil will be given an individual Google email and password.
- Google Suite/Google Drive is used and can be accessed on any device.
- 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 (Parkertron) using our school's Apple Manager and Mosyles Manager accounts. Paid apps must only be bought if permission gained from the headteacher and school admin are notified.
- Apps on Chromebooks can be installed by Parkertron remotely.
- Web filtering is in place through our broadband provider, RRA Services to provide safeguarding in line with Keeping Children Safe in Education.
- The headteacher receives an alert via email if blocked content is attempted to be searched using school Google accounts, whether in school, at home or within or outside of school hours. These are dealt with appropriately,

depending on the level of inappropriateness, threat or urgency and recorded on our online behavior and safeguard system (CPOMS).

- Alongside firewall and filtering systems, much emphasis is placed on our online safety curriculum to ensure our pupils know how to use the internet and respond to situations safely and responsibly .
- All data backed up using Google Drive.