

**Policy: Computing**

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| **Adopted by Governing Body on** | **September 2023** |
| **Headteacher** | **L Jones** |
| **Date of Review** | **September 2024** |

**Contents:**

[Statement of intent](#_Statement_of_intent_1)

1. [Legal framework](#_Legal_framework)
2. [Roles and responsibilities](#_Roles_and_responsibilities)
3. [The curriculum](#_National_curriculum)
4. [Cross-curricular links](#_Cross-curricular_links)
5. [Teaching and learning](#_Teaching_and_learning)
6. [Planning](#_Planning)
7. [Assessment and reporting](#_Assessment_and_reporting)
8. [Resources](#_Resources) and equipment
9. Health and safety
10. Homework
11. [Online learning and online safety](#_Online_learning_and)
12. [Authorised use of facilities](#_Authorised_use_of)
13. [Unauthorised use of facilities](#_Unauthorised_use_of)
14. [Implementation of this policy](#_Implementation_of_this)
15. Equal Opportunities
16. [Monitoring and review](#_Monitoring_and_review)

## **Statement of intent**

**Royd Nursery Infant School** understands that Computing is an integral part of the national curriculum and that Computing skills are important beyond the classroom.

Computers are a valuable resource in school, benefitting the way pupils learn and helping teachers maximise their role as educators. In light of this, our school is committed to ensuring that both staff and pupils have access to the necessary facilities to allow them to enhance their learning experience. We believe that it is important for pupils and employees to be confident and competent users of computers, and other technological resources, to aid development across the curriculum.

# Legal framework

1.1 This policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

         DfE (2022) ‘Keeping Children Safe in Education (KCSIE) 2022’

         Data Protection Act 2018

         General Data Protection Regulation (GDPR)

         Equality Act 2010

         DfE (2013) ‘Computing programmes of study: key stages 1 and 2’

1.2 This policy operates in conjunction with the following school policies:

         Online Safety Policy

         Cyber Response and Recovery Plan

         Data Protection Policy

         Technology Acceptable Use Agreement for Pupils

         Technology Acceptable Use Agreement for Staff

         Pupil Equality, Equity, Diversity and Inclusion Policy

# Roles and responsibilities

* 1. The **governing board** will be responsible for:
* Monitoring the implementation of this policy and its effectiveness.
* Monitoring the effectiveness of the Computing curriculum.
* Monitoring the progress and attainment of pupils in Computing.
* Holding the **Headteacher** and **Computing subject leader and curriculum team** to account for pupils’ Computing attainment and progress and the delivery of the Computing curriculum.
  1. Overall responsibility for monitoring the teaching of Computing throughout the school will lie with the **Computing subject leader and curriculum team**.
  2. The Computing subject leader and curriculum team will make decisions on:
* How Computing should support, enrich and extend the curriculum.
* The provision and allocation of resources.
* The ways in which the need for developments in the school’s Computing system can be assessed and records can be kept for these developments.
* How Computing can benefit the aims and objectives of the whole school.
  1. The **Computing subject leader and curriculum team and Headteacher** will be responsible for overseeing the implementation and reviewing of this policy.
  2. The Computing subject leader and curriculum team will be responsible for:
* Monitoring the progression of teaching and learning in Computing.
* The implementation of this policy across the school.
* Maintaining resources and advising staff on the use of materials.
* Assisting the **SLT** in deciding how resources are allocated.
* Supporting teaching staff to deliver the Computing curriculum.
* Keeping abreast of technological developments and using these to inform practice.
* Leading staff training on new Computing initiatives.
* Monitoring the quality of teaching and learning in Computing.
  1. Teachers will be responsible for:
* Planning and delivering lessons in line with this policy.
* Providing equality of opportunity to all pupils through their teaching approaches and methods.
* Keeping up-to-date assessment records.
* Ensuring pupils’ development of skills and knowledge progresses through their learning and understanding of Computing.
* Setting pupils appropriate targets based on their needs and prior attainment.
* Maintaining an enthusiastic approach to Computing.
* Taking part in Computing training and other CPD opportunities.
  1. The **Computing technician** will be responsible for:
* Maintaining and keeping computing equipment in good working order.
* Dealing with any reports of broken, damaged or faulty equipment.
* Ensuring the school’s **Data and E-security Breach Prevention and Management Plan** is adhered to.
* Carrying out checks on all computers **on an ongoing basis**.
* Adjusting access rights and security privileges in the interest of the school’s data, information, network and computers.
* Monitoring the computer logs on the school’s network and reporting inappropriate use to the **Headteacher and online safety coordinator**.
* Disabling the user accounts of staff and pupils who do not follow school policies, at the request of the **Headteacher**.
* Assisting staff with authorised use of Computing facilities, if required.
* Assisting the **Headteacher** in all matters requiring reconfiguration of security and access rights, and all matters relating to this policy.
* Accessing files and data to solve problems for a user, with their authorisation – if an investigation is required by the **Headteacher**, authorisation from the user is not required.
  1. Pupils will be responsible for:
* Using the school’s computing facilities appropriately.
* Being aware of the school’s rules around the use of computing equipment during lessons.
* Understanding how the use of Computing improves learning.
  1. Parents will be responsible for encouraging Computing skills and safe Computing use at home.

# The curriculum

* 1. The school aims to assist pupils in achieving attainment targets set out in the national curriculum. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills, and processes specified in the national curriculum. Pupils will learn a broad range of subject knowledge and draw on disciplines such as maths, science, Computing and art.

**EYFS**

* 1. All pupils in the EYFS are taught Computing as an integral part of the topic work covered during the academic year.
  2. All Computing objectives within the EYFS are underpinned by the following three prime areas outlined in the ‘Statutory framework for the early years foundation stage’:
* Communication and language
* Physical development
* Personal, social and emotional development
  1. There are four specific areas through which the three prime areas are strengthened and applied:
* Literacy
* Mathematics
* Understanding the world
* Expressive arts and design
  1. In the updated ‘Development Matters (2021)’ document, Technology has been removed as an area of learning. However, in the non-statutory document ‘Birth to Five Matters’, Technology remains an area of learning. Royd Nursery Infant School are therefore continuing to teach Technology as part of the EYFS curriculum.
  2. Pupils will be taught to:

Range 5 (Nursery/FS1)

• Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support

• Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets

• Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images

• Knows that information can be retrieved from digital devices and the internet

• Plays with a range of materials to learn cause and effect, for example, makes a string puppet using dowels and string to suspend the puppet

Range 6 (Reception/FS2)

Completes a simple program on electronic devices

• Uses ICT hardware to interact with age appropriate computer software

• Can create content such as a video recording, stories, and/or draw a picture on screen

• Develops digital literacy skills by being able to access, understand and interact with a range of technologies

• Can use the internet with adult supervision to find and retrieve information of interest to them

KS1

* 1. In KS1, pupils will 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 problems.
* Use logical reasoning to predict computing the behaviour of simple programs.
* Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
* Recognise common uses of information technology beyond schools.
* 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.

# Cross-curricular links

* 1. English
* Pupils develop their reading skills through using software packages and the internet.
* Pupils develop their writing skills through using software packages (e.g. 2Publish, PowerPoint).
* Pupils develop their communication and listening skills through learning to listen to software packages and video clips, and communicate their ideas effectively.
* Pupils develop their research skills through using the internet.
  1. Mathematics
* Pupils develop their understanding of spreadsheet, databases and graphs.
* Pupils develop their directional and positional language using hardware (e.g. BeeBots) and software (e.g. 2go).
  1. Music
* Pupils learn to use technology to compose music, and enhance their research skills through the internet and CD ROMs.
* Pupils listen to music electronically and record compositions electronically.
  1. Art
* Pupils learn to work effectively with their peers and others, and build positive relationships.
* Pupils learn how to use the software package Paint to create observational drawings
  1. Design Technology
* Pupils learn to create electronics design using software packages.
  1. Humanities
* Pupils learn to create historical information texts using PowerPoint.
* Pupils learn how to use the internet to research unfamiliar places.
  1. Spiritual, moral, social and cultural development
* Pupils learn to work effectively with their peers and others, and build positive relationships.
* Pupils learn to build their self-confidence through learning to explore hardware and software.
* Pupils learn about online safety.
* Pupils develop an understanding of other cultures and develop positive attitudes through researching societies.

# Teaching and learning

* 1. Computing lessons are delivered **through continuous provision** for pupils in **the EYFS.** **KS1** children receive a block of computing lessons during topic lessons depending on whether Computing is a focus for that half term.
  2. The school uses a variety of teaching and learning styles in computing lessons that are matched to the activity and ability of pupils. The main aim of these lessons is to develop pupils’ knowledge, skills and understanding.
  3. Teaching and learning styles are adapted to support pupils with SEND to ensure these pupils continue to have their confidence and self-esteem raised.
  4. Teachers ensure pupils apply their knowledge and understanding when developing ideas, planning and producing music, and evaluating these.
  5. Pupils will be taught to describe key characteristics and associated processes in common language, as well as understand and use technical terminology and specialist vocabulary.
  6. The school uses a mixture of whole-class teaching, group work and individual activities. Pupils are given the opportunity to work on their own and collaborate with others, listening to their peers’ ideas and treating these with respect.
  7. Principles for effective teaching include:
* Setting tasks in the context of pupils’ prior knowledge.
* Promoting active learning.
* Inspiring, exciting and motivating pupils to know more.
  1. Strategies for effective teaching include:
* Ensuring the teaching methods used suit the purpose and needs of the pupils.
* Providing a meaningful context and clear purpose when assigning tasks.
* Using focussed practical tasks to help pupils develop and evaluate Computing work.
* Ensuring tasks are built on skills and understanding.
  1. The **classroom teacher** will work with the **Computing subject leader and curriculum team** to ensure that the needs of all pupils are met by:
* Setting tasks which can have a variety of responses.
* Providing resources of differing complexity, according to the ability of the pupils.
* Setting tasks of varying difficulty, depending on the ability group.
* Utilising TAs to ensure that pupils are effectively supported (TAs are not used as part of lessons unless a child has a specific SEN need and requires 1:1 support).
  1. As part of Computing, pupils are provided with a personalised file on “W drive” where work should be stored. However, if work is completed on Purple Mash then children should save their work using their personalised log in details. All work should be saved using the shortened date and the child’s name (e.g. 12 6 20 James). The topic book is used to evidence pupils’ photos (e.g. using hardware such as BeeBots).
  2. Personalised “W drive” folders, Purple Mash accounts and topic books are an essential record of individual pupils’ experiences and ideas throughout a year, and will be seen as evidence for assessment and reporting purposes.
  3. Displays of computing work on the whole school Computing displays that are located in the computer room are used to celebrate achievement and support teaching and learning.
  4. Displays of computing work on topic displays are used to celebrate achievement and support teaching and learning.
  5. The school promotes displays of computing work on topic displays in classrooms to influence how pupils feel about their environment, convey standards and promote high expectations.
  6. Displays are used to communicate ideas, stimulate interest, celebrate pupils’ work, reflect the ethos of the school and respond to pupils’ interests.
  7. Computing will be used to support and extend learning beyond the school, through activities integrated with pupils’ school-based learning.

1. **Planning** 
   1. All relevant staff members are briefed on the school’s planning procedures as part of staff training.
   2. Throughout school, Computing is taught as a discrete lesson and as part of cross-curricular themes when appropriate.
   3. Teachers will use the key learning content in the DfE’s ‘Computing programmes of study: key stages 1 and 2’ and the national curriculum as a starting point for their planning.
   4. Issues of health and safety are addressed in the planning and delivery of the science curriculum.
   5. Lesson plans will demonstrate a balance of interactive and independent elements used in teaching, ensuring that all pupils engage with their learning.
   6. Lesson plans will demonstrate the balance of visual, auditory and kinaesthetic elements used in teaching, ensuring that all pupils with different learning styles can access the learning experience.
   7. There will be a clear focus on direct, instructional teaching and interactive oral work with the whole class and targeted groups.
   8. The school creates long-term, medium-term and short-term plans for the delivery of the Computing curriculum – these are as follows:

* Long-term: includes the topics studied in each **term** during the key stage
* Medium-term: includes the details of work studied each **term**
* Short-term: includes the details of work studied during each **lesson**
  1. The Computing **subject leader and curriculum team** is responsible for reviewing and updating long-term and medium-term plans, and communicating these to teachers.
  2. Teachers are responsible for reviewing and updating short-term plans, building on the medium-term plans, taking into account pupils’ needs and identifying the methods in which topics could be taught.
  3. Long-term planning will be used to outline the units to be taught within each year group.
  4. Medium-term planning will be used to outline the vocabulary and skills that will be taught in each unit of work, as well as highlight the opportunities for assessment.
  5. Medium-term plans will identify learning objectives, main learning activities and differentiation.
  6. Medium-term plans will be shared with the Computing **subject leader and curriculum team** to ensure there is progression between years.
  7. Short-term planning will be used flexibly to reflect the objectives of the lesson, the success criteria and the aims of the next lesson.
  8. All lessons will have clear learning objectives, which are shared and reviewed with pupils.

# Assessment and reporting

* 1. Pupils will be assessed, and their progression recorded, in line with the school’s **Assessment Policy**.
  2. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.
  3. The progress and development of pupils within KS1 is assessed against the descriptors outlined in the national curriculum.
  4. Throughout the year, teachers will plan on-going creative assessment opportunities in order to gauge whether pupils have achieved the key learning objectives.
  5. Assessment will be undertaken in various forms, including the following:
* Talking to pupils and asking questions
* Discussing pupils’ work with them
* Assessing work against the learning objectives
* Pupils’ self-evaluation of their work
  1. Teachers will record pupils’ ability and progression through two types of assessment – formative and summative.
  2. Formative assessment, which is carried out informally throughout the year, will be used to identify pupils’ understanding of subjects and inform their immediate lesson planning.
  3. In terms of summative assessments, the results of end-of-year assessments will be passed to relevant members of staff, such as pupils’ future teachers, in order to demonstrate where pupils are at a given point in time.
  4. Summative assessments are also used at the end of a unit of work. Teachers will make a judgement about the work of each pupil in relation to the national curriculum.
  5. Parents will be provided with a written report about their child’s progress during the **Summer term** every year. This will include information on pupils’ attitudes towards art, understanding of methods, investigatory skills and the knowledge levels they have achieved.
  6. Verbal reports will be provided at parents’ evenings during the **Autumn** and **Spring** terms.
  7. The progress of pupils with SEND will be monitored by the **SENCO**.

# Resources and equipment

* 1. The school has a selection of centrally stored materials, tools and equipment to ensure that all pupils have access to the necessary resources. All Computing equipment is stored in the computer room.
  2. The school library contains resources and topic books to support pupils’ research. The school receive books form Sheffield City Council Library on the topic focus for each half term. Books are displayed in the classroom linked to the half termly topic.
  3. The Computing budget covers the cost of materials and replacement tools. Class teachers are required to maintain the tools and equipment in their classrooms.
  4. Display walls are utilised and updated on a **half termly** basis, in accordance with the area of computing being taught at the time.
  5. At the **start of each school year**, the **Computing subject leader and curriculum team** will work with the **head teacher** to assess the school’s Computing resources and equipment to ensure there is sufficient equipment for pupils, allowing for funds to be allocated where necessary.

# Health and safety

* 1. Staff members will act in accordance with the school’s Health and Safety Policy at all times.
  2. Accidents and near-misses will be reported following the procedure outlined in the school’s Accident Reporting Procedure Policy.
  3. All staff members will be shown how to correctly use equipment as part of their induction training.
  4. Any ‘new’ activities which a teacher has not used in the classroom before will be trialled prior to being performed with pupils.
  5. Pupils are allowed full access to a wide range of resources and equipment for computing to maximise their learning experience.
  6. PPE, such as gloves and eye protection, is made available to all pupils and teachers where required.
  7. The risks of each task and the tools required will be assessed by the **classroom teacher** and **Computing subject leader and curriculum team** before lessons, and relevant PPE will be compulsory based on their decisions.
  8. All tools and equipment will be checked before the start of every lesson by the **classroom teacher**.
  9. Pupils will be taught to use tools and equipment properly by the **classroom teacher** before use. They will also be fully briefed on the importance of how to correctly use tools and equipment.
  10. All tools and equipment are stored in the **computer room** at the end of each day. Classrooms are **not accessed during lunch and break times by children** to prevent unsupervised access to potentially harmful tools or equipment.
  11. All electrical wires and sockets, where possible, are kept out of the way of pupils.
  12. Visual electrical inspections will be undertaken by the **Computing technician** on a **weekly** basis – any other problems will be reported immediately to the **health and safety officer and Computing technician**.
  13. Pupils will be given a **five-minute** break if they are using the computer for more than **one hour** at a time.
  14. The rules of the computer room will be displayed around the classroom, and both staff and pupils will be expected to familiarise themselves with, and adhere to, these rules.

# Homework

* 1. Homework will be set on a weekly basis and will follow and build upon curriculum content. The content of the homework will be decided by the class teacher and monitored by **SLT.** Throughout the academic year there will be a range of homework provided linked to differing subjects.
  2. Parents will receive a **weekly** newsletter informing them about the main topics and units of work that will be covered.
  3. Computing homework will be set via the schools learning platform “Purple Mash” where pupils’ will save and store their Computing related **homework**
  4. Homework will focus on numerous aspects of Computing, for example, Mathematics – 2graph, 2go, English – 2publish etc.
  5. Parents will be encouraged to discuss the homework that is set with their child. If they have any queries or other comments about the homework, parents should make an appointment to see their child’s class teacher.

# Online learning and Online safety

* 1. The school recognises the importance of teaching pupils about online safety, the potential dangers of the internet and their responsibilities when using communication technology – as set out in the school’s **Online safety policy**.
  2. As part of the school’s commitment to the principles outlined in ‘Keeping children safe in education’ (2018), the school will:
* Offer a safe online environment through filtered internet access.
* Ensure the filtering systems in place will prevent pupils from accessing terrorist and extremist materials, in accordance with the school’s **Online safety policy** and the Prevent duty.
* Take care to ensure the use of filtering and monitoring does not cause “over blocking”, which may lead to unreasonable restrictions on what pupils can be taught.
* Run **assemblies** on a **termly** basis about the potential dangers of the internet and how to stay safe online.
* Teach pupils about internet safety and cyberbullying during **Computing lessons, RSHE lessons** and as part of the school’s annual safety week where the Learn Sheffield Online Safety coordinator will deliver workshops to both pupils and parents.
  1. Pupils and staff who use the school’s computing facilities inappropriately will be reported to the **Headteacher**.
  2. The **Computing technician** will keep internet filters and other safeguarding controls up-to-date, to avoid misuse and protect pupils.

# Authorised use of facilities

* 1. The school will seek to promote responsible, appropriate and safe use of computing equipment and all members of the school community will be expected to adhere to the **acceptable use agreements, Cyberbullying Policy and Data and E-Security Breach Prevention and Management Plan**.
  2. Computing facilities will only be used to complete school-related work, unless they are being used for another clearly specified use. This includes, but is not limited to:
* Preparing work for lessons, meetings, activities, reviews, etc.
* Researching for any school-related tasks.
* Undertaking school-encouraged tuition, CPD or other training for educational benefit.
* Collating or processing information for school business.
  1. The use of personal email accounts is not permitted.
  2. The communication facilities provided by the school will only be used when required for school-related duties. Authorised use of the communication facilities includes, but is not limited to:
* Preparing work for lessons, meetings, activities, reviews, etc.
* Researching for any school-related tasks.
* Any school-encouraged tuition or educational use.

# Unauthorised use of facilities

* 1. All members of the school community are not permitted, under any circumstances, to:
* Use the Computing facilities for personal use without the authorisation of the **Online safety lead**. This authorisation must be requested on each occasion of personal use.
* Use the Computing facilities for commercial or financial gain without authorisation from the **Headteacher**.
* Use the Computing facilities at any time to access, download, send, receive, view or display any of the following:
  + Illegal material
  + Any message that could constitute bullying, harassment or any negative comment about other persons or the school
  + Remarks relating to a person’s sexual orientation, gender assignment, religion, race, disability or age
  + Online gambling
  + Remarks which may adversely affect the reputation of any organisation or person, whether or not they are known to be true or false
  + Any sexually explicit content
* Use, or attempt to use, the school’s Computing facilities to undertake any form of piracy, including the infringement of software licenses or other copyright provisions, whether knowingly or not.
* Use any inappropriate forums, chat services, bulletin boards or pay-to-view sites on the internet.
* Download, or attempt to download, any software intended for personal use.
* Use the internet for any auctioning activity or to purchase items, unless given the authority to do so by the **Headteacher** or authorised through another school policy.
* Copy, download or distribute any material from the internet or email accounts that may be illegal – this includes computer software, music, text and video clips.
* Obtain and post on the internet, or send via email, any confidential information about other employees, the school, members of the school community or suppliers.
* Use or attempt to use someone else’s user account.
* Physically damage the school’s computing facilities.
  1. If pupils or staff are subject to, or know about, any harassment or bullying occurring using the school facilities, they must report this immediately to the **Headteacher**.

# Implementation of this policy

* 1. The provision of the Computing curriculum will be monitored and assessed by the **Computing subject leader and curriculum team and Headteacher**.
  2. The suitability of all Computing equipment and programs will be assessed and updated, if necessary, by the **Computing technician** to ensure they are sufficient for effective learning.
  3. Staff will be provided with high-quality training regarding both curriculum delivery and the safeguarding issues around online safety.
  4. Any breach of this policy will be reported to the **Headteacher**.
  5. Use of the school’s internet connection and network use will be recorded and monitored by the **Computing technician**.
  6. The **Computing technician** has the ability to remotely view or interact with any computers on the school’s network. The **Computing technician** will use this to help implement this policy and to identify and solve any problems.
  7. All staff that use the school’s network will be issued with a unique password, which requires staff to change their password every **90 days**.
  8. User accounts are accessible by the **Headteacher** and **Computing technician** and **Online Safety lead**.
  9. Users are required to be familiar with the requirements of the Data Protection Act 2018 and the GDPR, and to ensure that they operate in accordance with the requirements outlined in this legislation. Pupils and employees will be required to comply to the following rules:
* Do not disclose any material about a person without their permission.
* Do not disclose materials that include information about a person’s racial or ethnic origin, sex life, sexual orientation, genetics, biometrics, political beliefs, physical or mental health, trade union membership, religious beliefs, financial matters and criminal offences.
* Do not send any personal data outside of the UK.

# Equal opportunities

* 1. All pupils will be provided with equal learning opportunities regardless of their background or characteristics, in line with the school’s **Equal Opportunities Policy**.
  2. To ensure pupils with SEND can achieve to the best of their ability, targets for pupils with SEND will be adapted and the delivery of the curriculum will be differentiated for these pupils.
  3. The curriculum and targets will also be adapted for other pupils based on their needs, e.g. pupils with EAL.
  4. Where possible, Computing is used in a specialist way to support pupils with SEND. The school will look to utilise software systems that can be modified to aid language, spelling or reading development.
  5. The school will aim to maximise the use and benefits of Computing as one of many resources to enable all pupils to achieve their full potential.

# Monitoring and review

* 1. This policy will be reviewed **annually** by the **Computing subject leader and curriculum team and Headteacher**, with any changes made to the policy being communicated to all teaching staff and the governing board.
  2. The curriculum plan will be monitored and evaluated by the **Computing coordinator and curriculum team**, including the planning, assessment and reporting arrangements in place.
  3. All members of staff directly involved with the teaching of Computing are required to familiarise themselves with this policy.