# Computing at Rokeby Primary School

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## 1. Subject statement

### Intent

At Rokeby Primary School we believe that Computing and the use of ICT is central to the education of all children. We aim to give each pupil the opportunity to apply and develop their technological understanding and skills across a wide range of situations and tasks.

Pupils are encouraged to develop a confident and safe approach to Computing and the use of ICT, with the understanding of the capabilities and flexibility of their resources. With the knowledge that Computing and ICT will undoubtedly continue to form a major part in the children's life at home, in further education and places of work, we ensure the Computing and ICT experiences and abilities that the children are equipped with at Rokeby, are effective and transferrable life skills.

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. 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 level suitable for the future workplace and as active participants in a digital world.

### Implementation

At Rokeby computing is taught using the Rising Stars Switched on Computing Scheme. This ensures children are able to develop depth in their knowledge and skills over the duration of each of their computing topics. We have a class set of laptops to ensure that all year groups have the opportunity to use a range of programs for many purposes across the wider curriculum, as well as in discrete computing lessons. Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps they have been taught.

The implementation of the curriculum also ensures a balanced coverage of 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, thus ensuring that learning is built upon.

- A Rokeby programmer can design, write and debug programs that accomplish specific goals.
- A Rokeby computational thinker can Use logical reasoning to predict the behaviour of simple programs.
- A Rokeby computer user can select, use and combine a variety of software to solve a given problem.
- All Rokeby computer users know how to use technology safely and respectfully.

## Impact

**July 2021**

Our newly designed computing curriculum provides children with ambitious opportunities to learn and rehearse skills in the following areas:

**Online safety**
**Understanding programming and debugging skills**
**Using IT to create and manipulate**
**Collect, store and present data**
**Connect to the wider world, safely.**

The curriculum has been devised to meet the needs of our learners and community. Online safety is a very real concept in our community, and it is paramount that we teach them the skills they need to stay safe online. The impact of this has been that children talk confidently about how they act online and are making better choices with their online identity.

After a staff skills audit, the decision was made to buy a scheme of work which sould support staff with high quality teaching of computing. This curriculum has been adapted for the Rokeby learners. As a result we now provide an engaging curriculum with high expectations where children can build on their skills.

Staff are more skilled that in previous times due to a staff skills audit carried out last year and some training that was put in place. More training is to be offered over the coming terms.

The curriculum is now well resourced and equipped for, after an audit of computing equipment in school was carried out.

Children speak positively about computing. Lower key stage 2 in particular enjoy coding and making their own games, this skill is built on with AI and VR in upper KS2. Children are now mostly able to access computing equipment with increasing independence.

## 2. Assessment

Assessment for learning:

At Rokeby teachers use the Progression of Computing at Rokeby Overview document to assess learning and objectives for the whole of the primary phase- this is based on the National Curriculum and Rising Stars Switch On Computing Scheme. This document forms the foundation of Computing at Rokeby as it shows class teachers the clear progression that is expected across the primary phase and between year groups.

Computing is recorded in foundation subject folders and should typically reflect examples of all four strands (Principles of Computing, Programming, Problem Solving and Using Computers). Some of the evidence will involve screenshots, printouts photographic evidence or files saved to the server where the activity has been computer based.

Teachers will use the children's work along with verbal assessment to make judgements on individual children's understanding of the computing skills covered. This will be used to inform their planning for the next computing unit, making sure to recover computational skills where necessary and to extend children's skills throughout the topic.

Assessment of Learning:

At Rokeby teachers assess children's knowledge, understanding and skills in Computing by making observations within class and by analysis of evidence. As part of our assessment for learning process (and in line with our school's assessment policy), children will receive both verbal and written feedback as a means of development.

Children are also encouraged to be critical of their own work, highlighting their own next steps.

Each half term, class teachers are responsible for completing an Computing assessment document which demonstrates whether children are WTS (working towards), EXS (expected) or GDS (greater depth). This is then used to inform future planning for the following half term so that teachers can ensure 'gaps are filled' and that the children have the opportunity to thrive in this subject.

The Curriculum Leader will then analyse this data and provide feedback to the Computing Leader in order to inform and improve future practice.

## 3. Planning and Resources

Computing at Rokeby is planned using both the Rising Stars Switched on Computing and the National Curriculum. This is then broken down into smaller objectives using Rokeby's Computing Progression document. This ensures that all objectives are met for each year group and children are learning the relevant skills needed to become Computational thinkers. These small objectives are covered again in different years to build upon known skills and extend them. Using the progression document ensures that all children are making relevant progress throughout their time at Rokeby.

Planning for Computing is, where appropriate, linked to the Power of Reading text that the children are studying that half term. This ensures that there is a depth and breadth to their learning. It also ensures cross curricular links to Computing from other subjects.

## 4. Teaching and Learning in the Early Years Foundation Stage (EYFS)

As part of the Statutory Framework for the Early Years Foundation Stage (2021) children in Reception and Nursery at Rokeby will begin to learn about Computing through Personal. Social and Emotional Development and Expressive Arts and Design.

## 5. Teaching and Learning- Key Stage One and Key Stage Two

Computing is usually taught each half term at Rokeby school. This can differ from year group to year group though and is planned using Switched On Computing. Where possible it is influenced by the class text from The Power of Reading. Some texts may be more suitable for a Computing focus.

Computing lessons usually last for an hour and be once or twice a week depending on the topic and availability and timetabling of resources. There is a timetable for each class to check where their allotted ICT time is.

A WALT is introduced or a 'hook' to grasp children into their current learning. A recap over skills happens as well as practising any old or new skills to ensure techniques are embedded and built upon.

## 6. Gifted and Talented Pupils

Computing is a subject where all children can be gifted and talented in individual areas – Computing requires different types of thinking and this will mean different children can be good at individual areas.

Teachers will ensure that gifted and talented children are able to succeed using assessment and feedback. This enables teachers to monitor progress in the subject. Those children who have a particular gift in the subject are supported to 'think outside of the box'.

## 7. The Role of the Subject Leader

As the Computing subject leader, the main role is to support the staff and children in developing a passion for Computing and computational thinking. The subject leader is also responsible for: -

- Offering guidance on the expectations of National Curriculum for Computing.
- Providing CPD training for staff.
- Listening to Pupil voice and feeding back to staff.
- To guide teachers through planning and resourcing Computing to ensure progression ensues and assessment is in-built.
- To help new teachers feel confident in both teaching and assessing the subject.
- Working with other schools to develop Computing across the academy trust.

## 8. Parents/ Carers

To ensure parents/carers are aware of their child's /children's development in Computing, Rokeby involves parents/ carers in the following ways…

- Parent workshops, each half term, allow class teachers to 'show off' children's learning - this may include a computing focus at least once during an academic year.
- End of year reports feedback on all foundation subjects- attainment and progress.
- Parent's evenings are held twice a year, in which parents/carers are provided with feedback on current strengths and areas to further develop.
- Open afternoons allow parents/carers to explore books and showcase all the learning and progress that has taken place.

If parents need to contact staff, they can also do so through communication books, class dojo and email, if they have any questions or concerns.

## 9. SMSC in Computing

Spiritual

ICT supports spiritual development by looking at how ICT can bring rapid benefits to discussions and tolerance to an individual's beliefs. However, children are exposed to the limitations and abuse of the internet where they question and justify aims, values and principles of their own and others' belief system

Moral

ICT supports moral development by looking at how ICT developments have had an impact on the environment as technology has meant that old ways of working have been changed to help the environment.

Social

ICT supports social development by completing of group work within lessons as well as practical tasks. Children are required to understand about social media and the advantages these sites have brought as well as the numerous problems such as cyber bullying.

Cultural

The development in technology has impacted different cultures and backgrounds in different ways. More developed countries are able to keep pace with the developments in technology whilst less developed ones can't.

## 10. Safeguarding in Computing

Teaching children to learn strategies to keep themselves safe is essential both in physical and online life. At Rokeby we take online safety seriously and aim to teach children how to feel empowered to act safely online, spot any potential dangers and be able to report these concerns appropriately. Due to previous online safety concerns within the community and school, we know that our older children are vulnerable to online activity and by taking this contextual element into account we will teach explicit online sexual abuse in year 6.

We also offer an additional 'one off' session for years 5 and 6 through our safer community policing team around online abuse and dangers.

In computing safeguarding is taught directly each Autumn Term through our 'We are safe online' unit.

Children's learning starts in EYFS with using computers safely in a physical safeguarding way – not toughing plugs, having drinks near machinery.

In key stage one pupils are taught about having passwords, keeping passwords safe and their online identity.

Through Key stage 2 children, children continue to develop their understanding of their online identity, using social media safely and how to report concerns about online activity.

In years 5 and 6 children learn how to spot potentially dangerous behaviours from others including bullying and online sexual harassment/abuse.