

## Royal Cross Primary School Computing Policy

### Purpose

This policy reflects the school values and philosophy in relation to the teaching and learning of Computing. It sets out a framework within which teaching and non-teaching staff can operate and gives guidance on planning, teaching and assessment.

The policy should be read in conjunction with the scheme of work for Computing which sets out in detail what pupils in different classes and year groups will be taught and how Computing can facilitate or enhance work in other curriculum areas.

This document is intended for:

- All teaching staff
- All staff with classroom responsibilities
- School Governors
- Parents
- Inspection teams

Paper copies of this policy are available from the office on request.

### Introduction

Computing prepares pupils to participate in a rapidly changing world in which work and other activities are increasingly transformed by access to developing digital technology.

This is particularly pertinent to Deaf pupils and hearing pupils with communication difficulties who need to learn to use technological equipment and resources such as:

- Tablet technology
- Communication technologies
- Short Message Service (SMS) on smart phones and Internet
- Email

Emerging digital technologies are essential to provide equal access for communication over distances and to access information.

In order to do this effectively it is essential that pupils develop keyboard skills and knowledge of English, so they can access written text. Computing will therefore be a crucial tool in order to access the wider community.

The use of Computing within the classrooms will include cross curricular activities intended to develop subject knowledge and activities designed to develop specific computing skills.

Our vision is for all staff and learners in our school to become confident users of technology so that they can develop skills, knowledge and understanding to enable them to use computing resources appropriately and effectively as powerful tools for teaching & learning.

### Aims and Objectives

We aim for our curriculum to:

- Prepare our pupils for life in the modern digital world whilst teaching them awareness, understanding & strategies to stay safe online.
- Provide a whole school approach to Computing/ICT, ensuring continuity and progression;
- Provide children with opportunities to develop computing capabilities across the curriculum;
- Provide challenge and excitement for pupils in Computing/ICT across the curriculum;
- Inspire children to be creative and innovative with new and emerging technologies.

- Be cross curricular and support all aspects of learning both at school and within pupil's homes, through Class Dojo; Bug Club; Espresso Home Access and the school web site.

We aim for members of staff to:

- Understand how to keep themselves & pupils safe online; to know what to do if there was a problem; how to get access to professional support (POSH)
- Be confident users of new technologies, able to use them effectively to support and enhance teaching and learning across the curriculum;
- Develop good subject knowledge in relation to Computing/ICT and Digital Literacy;
- Use computing technologies, to improve access to learning for pupils with a diverse range of individual needs, including those with SEN and disabilities.
- Provide pupils with challenging, engaging and motivating lessons;

We aim for our children to:

- Understand how to stay safe online;
- Become independent users of computing technologies;
- Be confident users of new technologies;
- Be able to use logical thinking and reasoning to solve problems;
- Gain and apply new skills and knowledge;
- To understand Computing and it's importance and relevance to today's world;
- To safely use digital technologies to support their communication with the wider world.

## National Curriculum

The Computing Curriculum focuses on three main areas:

- Computer Science – *The study of computers, including both hardware and software design*
- Information and Communication Technologies (ICT) – *The study or use of systems for storing, retrieving, and sending information.*
- Digital Literacy (DL) - *The ability to effectively & critically navigate, evaluate & create information using a range of digital technologies.*

By the end of key stage 1 pupils should:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions
- write and test simple programs
- use logical reasoning to predict the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of key stage 2 pupils should:

- design and write 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;
- generate appropriate inputs and predicted outputs to test programs
- use logical reasoning to explain how a simple algorithm works 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; and the opportunities they offer for communication and collaboration
- 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
- 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.

## Curriculum Development and Organisation

All our pupils experience delay in language and communication and many have additional learning, emotional and behavioural or physical difficulties in addition to their hearing loss or speech and language difficulty.

The organisation of teaching groups within the school means that pupils often remain in the same class for more than one year, and each class generally includes pupils from more than one year group. Teacher's planning ensures that there is progression in pupil acquisition of knowledge and skills and includes consolidation, new learning and challenge.

Royal Cross School scheme of work embraces a Creative Curriculum ethos and staff meetings take place on a regular basis to develop each topics breadth of coverage. The focus each term is on a particular Topic which will incorporate both cross curricular use of Computing and specific Computing skills teaching designed to develop individual Computing competence and understanding.

Achievement Certificates are awarded each term which recognise specific skill attainment but also cross curricular computing capability. These are recorded on a data base by the subject leader and used to track progress across different modules as well as individual achievement.

## Early Years

The focus of development in the Early Years is on the acquisition of basic Computing skills alongside using technology for a purpose. This is explored through Creative Curriculum Topics and the Lancashire Early Years Foundation Stage Planning Document.

This is developed through an access to a range of digital technologies including Tablet Technology; Clever Touch TV; interactive white board; digital cameras and a mouse/keyboard.

Other equipment is used such as programmable devices (Beebots) to make computing as 'hands on' and fun as possible.

iPads are introduced in the Early Years and families are supported to purchase iPads for home through the Birkdale Trust for Hearing Impaired Children funding.

## KS1 and KS2

At KS1 and at KS2 modules are allocated to class groups with their Creative Curriculum Topic, with teachers having the flexibility to respond accordingly to the specific learning needs of individual pupils. Teachers should ensure that aspects are identified within each module and covered during the year.

This may be by focusing on a module for a block of time or by planning a sequence of delivery. Discrete teaching is likely to be delivered with individual pupils rather than to the whole class and the context will be drawn from practical, meaningful activities within general class work.

## Teaching and Learning

### Planning

Curriculum planning is termly, by the teacher's own systems, and other individuals as appropriate in relation to the whole school format.

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. Teacher's planning is differentiated to meet the range of needs in any class including those children who may need extra support, those who are in line with average expectations and those working above average expectations for children of their age.

During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effective.

The Scheme of Work reflects the need to focus on skill development and teaching styles and activities, which are creative and visual throughout Reception, KS1 and for some pupils during KS2.

Interactive Whiteboards, Clever Touch TVs and peripherals (such as the digital camera, iPads) and generic and subject specific software are used to support teaching and learning across the curriculum. Technology is used as a vehicle to promote language and social development and to provide visual reinforcement of classroom communication and curriculum related concepts and skills.

A wide range of teaching styles are employed to ensure all children are sufficiently challenged:

- Children may work individually, in pairs or in small groups
- Groupings may be based on ability (either same or mixed) or on communication needs (same or contrasting)
- Different pace of working
- Different levels of input and support
- Different outcomes expected

The Computing subject leader will review teacher's plans to ensure a range of teaching styles are employed to cater for all needs and promote the development of computing capability and to monitor breadth of coverage across a range of digital devices.

Pupil's experiences of Computing should incorporate:

- Online Safety – across devices;
- Microsoft Office packages;
- Using communication packages, including Skype;
- Data handling;
- Modelling;
- Use of touch screens;
- Use of programmable toys/devices, i.e. Bluebots, Beebots;
- Use of digital cameras;
- Opportunities to work independently and co-operatively;
- Use of IT based models and simulations;
- Use of multimedia;
- Use of laptops
- Use of iPads
- Use of Espresso Computing Module and other software/apps

## Assessment and Record Keeping

Assessing computing is an integral part of teaching & learning and key to good practice. Assessment is used to plan future teaching and learning and to contribute to the pupil's record. Children's work in computing is assessed by making informal judgments as staff observe children during lessons.

Once children complete a unit of work a summary judgment is made of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit. Each pupil's attainment is then recorded on B Squared.

B Squared Computing records are kept of all individual attainment and are entered onto the system at 3 key points in the year. This data is used by the subject leader to track strengths, weaknesses and patterns of attainment.

Inter-School moderation meetings are attended by the subject leader and a portfolio of levelled, moderated samples are now being put together by this group.

Some additional evidence of pupil's work are retained as evidence of curriculum areas and projects undertaken, photographs of displays, tasks, completed work and video clips

## Roles and Responsibilities

**Computing Subject Leader** – The school has a designated Computing Leader to oversee the planning, teaching and organisation of computing.

The subject leader will be responsible for:

- Supporting others in planning, teaching and assessment;
- Facilitating the use of computing across the curriculum, working with other subject leaders;
- Supporting staff with training to enable them to deliver the curriculum confidently and effectively;
- Providing advice to staff in terms of resourcing, planning, using software, equipment, and effective resources;
- Managing school resources to ensure we have the technology to be able to deliver the curriculum effectively;
- Monitoring the planning and delivery of the curriculum and reporting to the Head Teacher.

**Head Teacher and Governing Body** – The Head Teacher and Governing Body provide support for the computing subject leader to fulfil their role.

The will provide support by:

- Ensuring teachers are able to deliver the curriculum by having access to the appropriate training and resources necessary;
- Providing opportunities for the computing leader to work with staff to plan and deliver lessons for the curriculum;
- Reviewing policies relating to Computing, Online safety and Information Security (GDPR).

**Class Teachers** – The class teacher must:

- Follow the guidelines set out in the Computing, Online safety and GDPR policies.
- Plan effective computing lessons using the schemes of work and awarding computing certificates of achievement.
- Ensure objectives for pupils are planned for either through discrete or cross-curricular lessons.
- Provide many opportunities for computing skills to be applied by pupils in a variety of ways, using a wide range of technology and software.
- Plan lessons which will support and/or challenge pupils as appropriate.
- Support the computing subject leader in monitoring and assessment by completing the relevant planning and completing B Squared assessments at key points of the year.

- Ensure support staff have access to planning and have the knowledge and skills to be able to support and challenge pupils in completing tasks.

**Support Staff** – Support staff must:

- Ensure they have the relevant planning necessary to support and challenge pupils;
- Ask for support from the class teacher and/or computing subject leader to ensure their training requirements are met.

**The School Business Manager** - will work with the SLT and the computing subject leader to:

- Coordinate the maintenance and organisation of computing technical resources
- Contribute to the development of the strategic planning for computing
- Provide technical advice and support to staff
- Co-ordinate the computing curriculum budget
- Be responsible for day/day management of technical systems, data protection (GDPR Officer)

## Monitoring and Evaluation

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring systems. This is through planning, lesson observations, pupil discussion, evaluating pupil work and scrutiny of data. Time is allocated for the task of reviewing samples of children's work and for peer to peer subject mentoring.

In order to ensure the curriculum is being planned for and delivered effectively.

The computing subject leader will monitor the following:

- The training requirements of staff.
- The impact of training already undertaken.
- Planning and assessment formats – taking on board any suggestions from staff on how they could be amended or used more effectively;
- Planning for each year class to ensure it is supportive, challenging, engaging, and uses a wide range of resources to meet curriculum requirements.
- Children's work - including work scrutiny; conversations with pupils; pupil skills audits.
- Computing teaching and learning by observing in the classroom and through supportive peer mentoring.
- The impact of the Computing action plan and future developments.
- School resources to ensure staff and pupils have access to the appropriate and necessary equipment and software.

By monitoring the above areas, the computing subject leader, Headteacher and Governing Body will be able to identify areas of strength and development. These will be used to inform future action plans to ensure clear direction.

## Staff Development

At Royal Cross we have a wide range of staff with differing areas of skills and knowledge in terms of computing. There is an expectation that all staff will endeavour to keep up to date with new developments and requirements in this area.

To support this, the computing subject leader, Headteacher and Governing Body will:

- Provide regular updates with regards to the curriculum;
- Identify key areas to develop staff knowledge and skills;
- Provide opportunities for staff training in areas identified and/or requested. This may be delivered by the Computing Leader or outside agencies;

- Identify areas of staff strength in knowledge and skills and encourage these members of staff to assist in training and support as well as leading by example and leading projects (web site management, video, blogging).

## **Cross Curricular Links**

As a staff we are all aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding.

## **Parental / Carer Involvement**

Parents/carers are encouraged to support the implementation of IT and computing where possible by encouraging use of IT and computing skills at home for pleasure, through home-learning tasks and use of the school website.

Parents/carers will be made aware of issues surrounding online-safety and encouraged to promote this at home. School will support parents/carers to develop IT skills and online safety awareness through school workshops.

Class teachers will support parents/carers to access online resources at home through termly home visits.

## **Home School Links**

Children are encouraged to complete homework tasks, when appropriate, using digital devices out of school. Teachers are sensitive to the fact that children may not have access to digital technology or may not wish to use it to complete tasks out of school. Pupils personal digital devices are not allowed in school. *iPads may be used for the taxi journeys to/from school but are left in the school office.*

The school email and website address has been given to parents. More parents are now using this to contact staff, arrange meetings etc.

Each class has an individual email and a Class Dojo account (secure instant messaging) that families are encouraged to use for sharing news and achievements.

The school has a Web site that is regularly updated and used for sharing gallery pictures; curriculum & school newsletters; parent information; School Council news; holiday dates and general information.

The school provides access to ESPRESSO Home LEARNING and CODING to support both parents and children in home learning across the breadth of the computing curriculum.

## **Online Safety**

Internet access is planned to enrich and extend learning activities. The school has acknowledged the need to ensure that all pupils are responsible and safe users of the Internet and other communication technologies. We aim to provide a curriculum which includes education on how to stay safe online and when using other technology. We also offer a safe online environment through filtered internet access. Please refer to the school Online-Safety, policies for further details.

## **Inclusion**

We recognise Computing offers particular opportunities for our pupils who have a range of special educational needs. Technology can cater for the variety of learning styles, which a class of children may possess. Technology is used to:

- support pupils to develop strategies to stay safe online

- support pupils to become responsible digital citizens

## Health and Safety

We will operate all computing 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 screen breaks if they are to spend any length of time on computers.

Specific rules for the use of Internet and E-mail are displayed by all computers. The virus checker is updated regularly.

## Equal Opportunities

“All pupils, regardless of race, class or gender, should have the opportunity to develop Computing capability.”

It is our policy to ensure this by:

- ensuring all children follow the scheme of work for Computing
- keeping a record of children’s Computing achievement to ensure equal access and achievement of potential
- providing curriculum materials and software which are in no way class, gender or racially prejudice or biased
- monitoring the level of access to technology in the home environment to ensure no pupils are unduly disadvantaged
- Investigating ways in which parents / carers and pupils can be supported in developing their knowledge of technology, online safety within the home is an ongoing theme.

## Effective and Efficient Deployment of ICT Resources

Digital resources are deployed throughout the school to maximise access, to enhance teaching & learning and to raise attainment. This includes an Interactive Whiteboard and Projector in each teaching area plus additional laptops; iPads and digital cameras. All classes have mirroring programs/ Apple TV to enable teaching from the iPads on the large interactive white board. Some classes are being resourced with interactive ‘Clever Touch’ TVs.

The school has a Wi-Fi network that enables internet access to all devices in the school building, including mobile devices. The Wi-Fi is secure and can only be accessed by user name and password monitored by the School Business Manager.

The library computer uses a Library Management System to log details of books in the school library.

A password protected internet point with laptop is available in the Staff Resource Room and all teachers are allocated a mini iPad, laptop and an encrypted flash drive.

Core software is loaded onto each computer in school. Subject specific titles and any specialist equipment e.g. sensors, are kept in the computing cupboard and can be borrowed when needed.

All classrooms have an internet point. A staff resource room provides access to a computer for staff.

The school has a designated Conference Room with a smart board, laptop and internet access. This is used for ‘in house’ training and for training courses run by staff from Royal Cross School. It is available for colleagues and other agencies for meetings and training. It is also used by pupils who show case a photographic slide show of their achievements at EHCP review meetings.

## School Liaison, Transfer, Transition & New Developments

The school is connected to the Lancashire intranet which enables the secure transfer of information electronically.

Email is used frequently to securely liaise with the LEA, governing body and other schools using Office 365 services. Electronic communication is established with most parents by using Class Dojo (instant messaging), texting service and class email accounts.

Information is securely transferred electronically to aid transition to, between or within schools.

School uses the BTLS Light speed filtering service to protect pupils & staff when using search engines on the internet. This is monitored by the SLT, School Business Manager and the Online Safety Committee.

## **Management Information System (MIS)**

Digital technology enables efficient and effective access to and storage of data for the school's management team, teachers and administrative staff.

The school complies with GDPR and LEA requirements for the management of personal information in schools. We currently use SIMs which operates on the school's administrative network and is supported by the LEA Schools' ICT Services.

Only trained and designated members of staff have authority and access rights to input or amend the data.

The school has defined roles & responsibilities to ensure data is well maintained, secure and that appropriate access is properly managed with appropriate training provided.

## **Other Documents**

Please also refer to the following documents for further and supporting information:

- Online-safety policy
- Acceptable Usage Agreements
- GDPR policy
- KS1 and KS2 National Curriculum Coverage documents