

Round Hill Primary School



Dream, believe, achieve together.

Computing Policy

Updated by: Aamir Khalique (May 2022)

Contents

Introduction

Curriculum Aims

Rationale

Curriculum objectives

Early Years outcomes

Key Stage 1 outcomes

Key Stage 2 outcomes

Cross Curricular links

Planning

Inclusion

Assessment

Monitoring and Evaluation

Role of subject leader

Parental involvement

Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Round Hill Primary School, we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

This policy is based on government recommended/statutory programmes of study. Due to the fast pace of technology innovation and constantly emerging trends, it is recommended that this policy is reviewed, at minimum, at the start of every academic cycle.

Curriculum Aims

Implementation:

Computing skills are taught both discretely and cross-curricular, supporting other areas of learning across the school. In Foundation and Key Stage 1, children are taught to use equipment and software confidently and purposefully, to communicate and handle information and to support their problem solving, recording and expressive skills. In Key Stage 2, our children extend their use of computing that they use for communication, investigation and programming and work to understand how to communicate safely. Our planned curriculum for digital literacy that includes online safety is broad in covering a range of issues.

Our Computing curriculum is designed to allow children time to think, discuss, practise, explore and embed. This allows time for teaching, practice and repetition – both in a year group and across both key stages. Curriculum coverage is mapped out carefully from Year 1 to Year 6, which allows some key concepts to be developed at a deeper level of learning, understanding and mastery. Fundamental knowledge and skills are covered at key points throughout the primary phase and repeated to allow pupils to build on what has been taught before. Where year groups are covering an area in more depth,

this will be highlighted in green on the Curriculum Depth Map below. Lessons will be planned and a knowledge organiser provided for pupils, which outlines the area to be taught, where the new knowledge and skills fit in with their prior learning, any sticky knowledge they need to understand and key vocabulary they need to learn.

Round Hill believes that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our pupils.

We will also:

- Provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.
- Enthuse and equip children with the capability to use technology throughout their lives.
- Give children access to a variety of high quality hardware, software and unplugged resources.
- Instil critical thinking, reflective learning and a 'can do' attitude for all our pupils, particularly when engaging with technology and its associated resources.
- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school
- Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- Provide technology solutions for forging better home and school links.
- Utilise computational thinking beyond the Computing curriculum.
- Exceed the minimum government recommended/statutory guidance for programmes of study for Computing and other related legislative guidance (online safety).

Rationale

Intent:

At Round Hill we aim to prepare our children for a rapidly changing world through the use of technology. Our Computing curriculum is designed to enable them to use computational thinking and creativity to further understand our world. Our curriculum design has deep links with Mathematics, English, Science, and Design and Technology. At the core of our computing curriculum 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, we intend for our children to use information technology to create programs and systems, within a range of content. By the end of Key Stage 2, we want our children to become digitally literate -to 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.

The school believes that IT, computer science and digital literacy are essential life skills necessary to fully participate in the modern digital world. This will include:

- allow children to become creators of digital content rather than simply consumers of it.
- provides access to a rich and varied source of information and content.
- communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- can motivate and enthuse pupils.
- offers opportunities for communication and collaboration through group working
- helps children to achieve our school vision values of Daring, Dreaming, Reflecting, Persevering and working Together.

Curriculum objectives

The National Curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Are responsible, competent, confident and creative users of information and communication technology.

Early Years Outcomes

- We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:
- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay.
- Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices or control remotely operated toys.
- Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets.
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language.

Key Stage 1 Outcomes

- 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.
- 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.

Key Stage 2 Outcomes

- 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.

Cross Curricular Links

At Round Hill we have chosen the Purple Mash Computing Scheme of Work from Reception to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool. Furthermore, it gives excellent supporting material for less confident teachers.

Planning

Lessons are planned using the Purple Mash Computing Scheme of Work. For each year group, this scheme of work outlines the different Computing areas to be covered each term. It also provides teachers with detailed individual lesson plans which ensure that curriculum coverage is achieved.

As we have mixed year groups at Round Hill, teachers should follow the mixed year group cycle planning which is detailed on the Purple Mash website. The subject leaders have created a Purple Mash user guide which clearly shows teachers how to access their year group's planning.

Inclusion

At Round Hill, we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and children who have an EHCP. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the Computing curriculum

We place particular emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEN and disabilities. With this in mind, we will ensure additional access to technology is provided throughout the school day and in some cases beyond the school day.

Assessment

Pupil attainment is assessed using the 2Simple Computing Assessment Tool for Years 1 to 6. To make this in line with Round Hill's assessment policy, these assessment objectives have been copied into Insight, our online school assessment tool.

- The tool enables staff to accurately identify attainment of pupils through the detailed exemplification it has for each key learning intention.
- Teachers keep accurate records of pupil attainment by entering termly data onto Insight, this will inform future planning.
- Children are encouraged to self, peer and group assess work in a positive way.
- Formative assessment is undertaken each session/interaction in Computing and pupils are very much encouraged to be involved in that process. Through using the progression of skills documents and displays from 2Simple, both teachers and pupils can evaluate progress. Features such as preview and correct in Purple Mash are used to further support feedback and assessment.

Monitoring and Evaluation

Impact:

Impact is evidenced through:

- Proficient users of technology who are able to work both independently and collaboratively
- Computing hardware and software being utilised to enhance the learning outcomes of our children, across the curriculum.
- Clear progression in technical skills
- Demonstrating knowledge when using tools or skills in other areas of the curriculum and in enrichment opportunities both in and out of school
- A learning buzz as children engage in programming, instruct floor robots, prepare online safety presentations and design body confidence video campaigns
- The use and outcomes of the varied activities
- Low-stakes tests/quizzes

Monitoring standards of teaching and learning within Computing is the primary responsibility of the Computing Leader. All teachers are expected to keep an online portfolio or track children's work using Purple Mash. This portfolio must contain work samples from all areas of the curriculum taught for the year group.

Monitoring will be achieved through:

- Work scrutiny,

- Learning walks,
- Observations,
- Pupil voice,
- Teacher voice and
- Dedicated Computing Leader and Assessment Leader time.

Evaluation and Feedback will be achieved through:

- Dedicated Computing Leader and Assessment Leader time,
- Using recognised standards documentation for end-of-year expectations,
- Using recognised national standards for benchmarking Computing provision in primary schools.
- Written feedback on evaluation of monitoring activities to be provided by the Computing Leader in a timely manner.
- Feedback on whole school areas of development in regard to Computing to be fed back through insets/AOB/staff meetings.

Role of Subject Leader

There is a computing subject leader who is responsible for the implementation of computing policy across the school. Their role is to:

- offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of Computing.
- provide colleagues opportunities to observe good practice in the teaching of computing.
- maintain resources and advise staff on the use of digital tools, technologies and resources.
- monitor classroom teaching or planning following the schools monitoring programme.
- monitor the children's progression in computing, looking at examples of work of different abilities.
- manage the computing budget.
- keep up-to-date with new technological developments and communicate information and developments with colleagues
- lead staff training on new initiatives.
- attend appropriate in-service training
- have enthusiasm for computing and encourage staff to share this enthusiasm.
- keep parents and governors informed on the implementation of computing in the school.
- liaise with all members of staff on how to reach and improve on agreed targets
- help staff to use assessment to inform future planning.
- provide equality of opportunity using a range of teaching approaches and techniques
- use appropriate assessment techniques and approaches
- set suitable targets for learning as outlined in the inclusion policy.

Parental Involvement

Parents 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 set on Purple Mash and use of the school website. Parents will be made aware of issues surrounding online safety and encouraged to promote this at home.