Cledford Primary School and Gainsborough Primary & Nursery School

A Federation of Cheshire East Primary Schools

Cledford Primary School

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Establishment Number: 3821

School Principal: Mr C Adlington

Gainsborough Primary & Nursery School

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Establishment Number: 3810

School Principal: Mrs J Nurse

Federation Headteacher: Mrs A J Booth

Federation Curriculum Policy

Computing

Reviewed: October 2022

Signed:

Mrs J Sercombe (Chair of Governing Board) …….

Mrs AJ Booth (Federation Headteacher) …….

Mrs J Nurse (School Principal GPNS) ……..

Mr C Adlington (School Principal CPS) ……

Next Review Date: October 2024

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Statement of Intent, Implementation and Impact

At Cledford Primary School and Gainsborough Primary and Nursery School, we strive to prepare our children for a rapidly changing world through the delivery of dynamic, modern and exciting computing sessions. Our high-quality computing curriculum is designed to enable children to use rational thinking and problem solving to aid the understanding of our world while building on wider subject knowledge. Our curriculum design has deep links with mathematics, science, and design and technology which builds on our vision of a 'spiral' curriculum. We intend for our children to use information technology to write code, design and debug programmes and access a range of content – all while continually building on and improving their computing vocabulary.

Implementation

Our Computing curriculum is sequential and builds on prior learning which is often revisited and reviewed. This helps our children to know more and remember more. It is comprised of three aspects: Digital Literacy, Computational Thinking and Information Technology – all of which encompass internet safety at their core.

Computing skills are taught both discretely and by a cross-curricular approach. In Reception and Key Stage 1, children are taught to use equipment and software confidently and purposefully and to communicate and handle information and to support problem solving. In Key Stage 2, our children extend their understanding of computing to advance communication, investigation and programming – with an underlying focus of navigating the internet safely in a respectful manner. This includes covering a range of issues such as anonymity, password protection, addressing negativity and reporting inappropriate behaviour.

Impact

Pupils are:

- Proficient users of technology who are able to work both independently and collaboratively.
- Equipped with the skills and knowledge to use technology effectively and safely.
- Skilled at problem solving and logical thinking.
- Driven by exciting learning opportunities which provide challenge and opportunities to investigate the wider curriculum.

Our curriculum plans in computing are clear on what end points the pupils are working towards and what pupils will need to be able to know and do at those end points.

The computing curriculum is planned and sequenced so that new knowledge and skills build on what has been taught before, and towards defined end points.

The computing curriculum reflects the school's local context by addressing typical gaps in pupils' knowledge and skills.

The computing curriculum is broad and creatively linked to other subjects.

Disadvantaged pupils or pupils with SEND are supported to access the same broad and challenging curriculum as all pupils.

Teachers have expert knowledge of computing and, where they do not, they are supported to address any gaps so that pupils are not disadvantaged.

Teachers use assessment effectively to check pupils' understanding in order to inform their teaching and further planning; this helps pupils to embed and connect knowledge fluently and to further develop their learning and skills.

As a federation, 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. Furthermore, it gives excellent supporting material for less confident teachers. Where teachers wish to supplement Purple Mash with other resources they will use their professional judgement and knowledge to select the correct tools for their lessons.

1. **Legal Framework**

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

- DfE (2013) 'National curriculum in England: computing programmes of study'
- DfE (2017) 'Statutory framework for the early years foundation stage'

2. Roles and Responsibilities

2.1. The **computing coordinator** is responsible for:

- Preparing policy documents, curriculum plans and schemes of work for the subject.
- Reviewing changes to the national curriculum and advising on their implementation.
- Monitoring the learning and teaching of computing, providing support for staff where necessary.
- Ensuring the continuity and progression from year group to year group.
- Encouraging staff to provide effective learning opportunities for pupils.
- Helping to develop colleagues' expertise in the subject.
- Organising the deployment of resources and carrying out an annual audit of all computing resources.
- Liaising with teachers across all phases.
- Communicating developments in the subject to all teaching staff.
- Leading staff meetings and providing staff members with the appropriate training.
- Organising, providing and monitoring CPD opportunities in the subject.
- Ensuring common standards are met for recording and assessment.
- Advising on the contribution of computing to other curriculum areas, including cross-curricular and extra-curricular activities.
- Collating assessment data and setting new priorities for the development of computing in subsequent years.

2.2. Classroom teachers are responsible for:

- Acting in accordance with this policy.
- Ensuring progression of pupils' computing skills, with due regard to the national curriculum.
- Planning lessons effectively, ensuring a range of teaching methods are used to cover the content of the national curriculum.
- Liaising with the **computing coordinator** about key topics, resources and supporting individual pupils.
- Monitoring the progress of pupils in their class and reporting this in line with school requirements.
- Reporting any concerns regarding the teaching of the subject to the **computing coordinator** or a member of the **SLT**.
- Undertaking any training that is necessary in order to effectively teach the subject.
- Ensure that subject specific vocabulary documents are available and used to support learning.

3. Early Years Provision

3.1. Activities and experiences for pupils will be based on the seven areas of learning and development, as outlined in the DfE's 'Statutory framework for the early years foundation stage'.

3.2. Provision for early years pupils focusses on four specific areas:

- Literacy
- Maths
- Understanding the world
- Expressive arts and design

3.3. All activities will adhere to the objectives set out in the framework.

3.4. In particular, computing-based activities will be used to develop pupils' understanding of the world, helping them to comprehend a world beyond their local community.

4. The National Curriculum

4.1. The national curriculum is followed and provides a full breakdown of the statutory content to be taught within each unit.

KS1 Objectives

Children should be taught to:

4.2. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions

4.3. Create and debug simple programs

4.4. use logical reasoning to predict the behaviour of simple programs

4.5. Use technology purposefully to create, organise, store, manipulate and retrieve digital content

4.6. Recognise common uses of information technology beyond school

4.7. 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.

KS2 Objectives

4.1. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

4.2. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output

4.3. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

4.4. 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

4.5. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

4.6. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

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

4.8. Cross-curricular links

4.9. Wherever possible, the computing curriculum will provide opportunities to establish links with other curriculum areas.

4.10. **English**

- Children are encouraged to create reports which link to writing exercises in English lessons.
- Pupils will research elements of English and cross-curricular topics through the use of the internet.
- Pupils' computing and English year group specific vocabulary will be broadened through vocabulary based pre, post and revisited learning.

4.11. **Maths**

- Pupils use their knowledge and understanding of measurement and data handling.
- Where appropriate, pupils record findings using charts, tables, graphs and spreadsheets.
- Pupils use data analysis in order to identify patterns, investigate information and present results.

4.12. **Science**

- Pupils use their knowledge of the natural world to identify and analyse features of physical computing.
- Pupils' investigative and practical skills are developed through the use of fieldwork and problem-solving activities.

4.13. **Computing**

- Pupils will use computing to aid their understanding of other elements of the curriculum.

4.14. **Spiritual development**

- Pupils are encouraged to think about the effect of human actions on the environment.
- Children will be encouraged to understand the impact and benefit that computing has on our world.

5. Teaching and Learning (Pedagogy)

Our school 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.

Our aims:

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.

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.

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.

Provide technology solutions for forging better home and school links such as school comms.

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).

5.1. **Feedback**

Feedback should:

- Redirect and focus either the teachers' or the learners' actions to achieve a goal.
- Be specific accurate and clear.
- Encourage and support further effort.
- Inform future planning, ensuring continuity, progression and appropriate differentiation.
- Facilitate problem solving and investigation.
- Alert the teacher to misconceptions, so that the teacher can address these in subsequent lessons.

- Encourage children to take responsibility for improving their own learning by self-assessment and peer assessment.
- Be seen by pupils as a positive approach to improving their learning.

6. Planning

6.1. All relevant staff members are briefed on the school's planning procedures as part of staff training.

6.2. Throughout the school, computing is taught as a discrete lesson and as part of cross-curricular themes when appropriate.

6.3. Teachers will use the key learning content in the DfE's statutory guidance 'National curriculum in England: computing programmes of study' – This is complemented by the use of Purple Mash Planning.

6.4. Lesson plans will demonstrate a balance of interactive elements used in teaching, ensuring that all pupils engage with their learning.

6.5. Long-term planning overviews are used to outline the units to be taught within each year group.

6.6. Medium-term planning documents are used to outline the vocabulary and skills that will be taught in each unit of work, as well as highlighting the opportunities for assessment.

6.7. Medium-term plans will identify learning objectives, main learning activities and differentiation.

6.8. Medium-term plans will be shared with the computing coordinator to ensure there is progression between years.

6.9. Short-term planning will be used flexibly to reflect the objective of the lesson, the success criteria and the aim of the next lesson.

6.10. Short-term planning is achieved by building on medium-term planning, considering pupils' needs and identifying the method in which topics could be taught.

6.11. All lessons will have clear learning objectives, which are shared and reviewed with pupils.

7. Assessment and Reporting

7.1. Assessing children's learning in computing enables teachers to identify pupil's retention of knowledge, misconceptions and next steps.

7.2. Assessment will be undertaken in various forms, including the following:

- Talking to pupils and asking questions
- Discussing pupils' work with them
- Marking work against the learning objectives
- Specific assignments for individual pupils
- Observing practical tasks and activities
- Pupils' self-evaluation of their work

7.3. Assessment for learning takes place in each lesson. This may take the form of a quick oral recap activity (see agreed school pedagogy for teaching & learning) or a short recorded task. All tasks are quick and pacey as new learning is the priority.

7.4. In terms of summative assessments, the results of end-of-year assessments will be passed to relevant members of staff, such as the pupil's future teacher, in order to demonstrate where learners are at a given point in time.

7.5. Parents will be provided with a written report about their child's progress during the Spring term every year. These will include information on the pupil's attainment, progress and attitude towards computing.

7.6. Verbal reports will be provided at parents evenings during the Autumn and Summer terms.

7.7. Teachers carefully monitor pupils with SEND to ensure they have access to the curriculum. Where appropriate, support is offered and reasonable adjustments are made. Teachers are supported by the curriculum lead in collaboration with the SENDCo.

8. Resources

A range of resources is available which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential.

Resources are suitably maintained and replenished when needed, which is overseen by the Computing Leader and IT support (Darbro).

Audits of school resources are conducted regularly by the Computing Leader, which informs bidding for budgets allocations.

The Computing Leader keeps up to date with the latest technology resources and will make informed decisions about possible procurement of them through their own research.

Suggestions for getting the very best out of the resources are made available to teaching and support staff by the Computing Leader.

The Computing Action Plan details foreseen future resource procurement which is shared with senior leaders before the budget setting period.

9. Equal Opportunities & Inclusion

9.1 We are committed to giving all of our children every opportunity to achieve excellence. We do this by taking account of pupils' varied life experiences and needs.

9.2 Our curriculum is broad and balanced and we have high expectations of all children.

9.3 The achievements, attitudes and well-being of all our children matter, regardless of ethnicity, attainment, age, disability, gender or background.

9.4 We actively seek to remove barriers to learning and participation that have the potential to hinder or exclude individuals or groups of children.

9.5 Equality of opportunity must be a reality for our children and we ensure this through the attention we pay to the different groups of children within our school:

- girls and boys;
- minority ethnic and faith groups;
- children for whom English is an additional language;
- children with special educational needs and disabilities.

10. Staff Development

10.1 Teachers are expected to have good, up to date subject knowledge and to use the materials that are available to them in order to promote the best outcomes for children.

10.2 Training needs are identified as part of our whole school monitoring and evaluation, performance management/appraisal and induction programmes. These needs are reflected in the School Development Plan.

10.3 Ongoing coaching is given, where needed, throughout the year by subject leaders and SLT.

10.4 Staff have the opportunity to observe their colleagues teach as part of an informal coaching programme.

10.5 Subject leaders arrange for relevant advice, resources and information, for example feedback from training, to be disseminated appropriately with colleagues.

10.6 Where necessary, in conjunction with the SLT and in order to secure outstanding subject knowledge, subject leaders lead or organise training for colleagues.

11. Monitoring and Review

11.1 This policy will be reviewed on an bi-annual basis by the computing coordinator.

11.2 The computing coordinator will monitor teaching and learning in the subject at the school, ensuring that the content of the national curriculum is covered across all phases of pupils' education.

11.3 Any changes made to this policy will be communicated to all teaching staff.

This policy will be reviewed **October 2024**.

This policy operates in conjunction with the following school policies:

- Special Educational Needs and Disabilities (SEND) Policy
- Feedback Policy
- Assessment Policy
- eSafety Policy

- Equal Opportunities Policy