



Holme St Cuthbert Primary School



Primary Mathematics Policy

Contents:

1. Mission Statement
2. Introduction
3. Aims
4. Statutory Requirements
5. Subject Organisation
6. Spoken Language in Maths
7. Approaches to Number
8. Approaches to Shape, Space and Measures:
9. Approaches to Calculations
10. Mathematical language and vocabulary
11. Computing (formerly known as Information and Communication Technology – ICT)
12. The Learning Environment
13. Homework and Parents
14. Cross-curricular Activities
15. Assessment and Target Setting (see also assessment and marking policy)
16. Target Setting
17. Inclusion
18. Equal Opportunities
19. Pupils with Special Educational Needs and Individual/Group Education Plans
20. Role of Subject Leader

1. Mission Statement:

'A community of learning, growing together.'

2. Introduction

At Holme St Cuthbert, we believe that, through the study of mathematics, children make sense of their world and enrich their understanding of it.

This policy sets out the framework in which the mathematics curriculum will be taught.

Through this curriculum, children will become fluent in the fundamentals of mathematics by:

- Developing conceptual understanding.
- Recalling and applying knowledge rapidly and accurately.
- Reasoning mathematically.
- Solving problems by applying mathematical skills to a variety of routine and non-routine problems.

Despite being a subject of its own, pupils should make rich connections with science and other subjects.

3. Aims

Mathematics enables children to make sense of the world around them through developing the ability to calculate, communicate, reason and solve problems. Through this, children can explore, understand, and appreciate relationships and patterns in both number and shape-and-space in their everyday lives.

1.1 At Holme St Cuthbert Primary School we aim to:

- promote enjoyment and enthusiasm for learning through practical activity, cross-curricular learning, exploration and discussion;
- develop mathematical skills and knowledge and quick recall of basic facts in line with the National Curriculum Mathematics Programmes of Study;
- promote confidence and competence with numbers and the number system;
- develop the ability to think mathematically: solve problems through decision making and reasoning in a range of contexts;

- develop a practical understanding of the ways in which information is gathered and presented;
- explore features of shape and space, and develop measuring skills in a range of contexts;
- develop communication skills;
- develop both independence and co-operation;
- understand the importance of mathematics in everyday life and promote mathematical thinking as a life skill.

4. Statutory Requirements

4.1 Statutory requirements and expectations for the teaching and learning of maths are laid out by stages in the National Curriculum (2015) and in the Early Years Foundation Stage.

4.2 The Governing Body

Regular reports are made to the governors on the progress of maths provision and to our Curriculum committee.

This policy will be reviewed every three years or in the light of changes to legal requirements.

5. Subject Organisation

5.1 The maths Curriculum is delivered based on the Hamilton Trust Scheme of work ensuring coverage over a 2 year rolling programme. The Early Learning Goals are followed to ensure continuity and progression from Early Years Foundation Stage through to the National Curriculum. Pupil provision is related to age related expectations, but may be adapted in line with our Special Education Needs Policy.

5.2 For information on Foundation / Early years & KS1) Forest School see EYFS policy.

5.3 At Key Stage Two children will be taught maths sessions in a two-year classes in line with the curriculum expectations (Lower and Upper Key Stage 2), with the consolidation and development of maths skills a priority across a broad range of curriculum subjects.

5.4 The National Curriculum details what we teach in the long-term. Our yearly teaching programme identifies the key topics in maths that we will teach each year and ensures full coverage.

5.5 Our maths weekly plans are from Hamilton Trust scheme of work, and are adapted by the class teachers to suit the needs of each class. These plans define what we teach, and ensure an appropriate balance and distribution of work across each term. Plans will also include expected outcomes for each lesson and give details of how the lessons are to be taught. The class teacher is responsible for keeping these plans and making adjustments as necessary to maintain high expectations and sensitivity to children's progress.

5.6 We aim to provide all children with the necessary skills in order to develop into successful mathematicians through a variety of teaching and learning approaches. It is our aim to develop children's skills and mathematical thinking through whole class and group teaching; opportunities for discussion; partner work; and children's own questions. Key questions are highlighted on planning sheets in order to promote higher order thinking skills.

6. Spoken Language in Maths

The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Children are encouraged to develop effective communication skills in readiness for later life. Lessons include opportunity for:

- Paired talk (within and across ability and age groups);
- Small group discussion (Independent and adult guided);
- Whole class communication.

7. Approaches to Number:

Children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects,

they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

8. Approaches to Shape, Space and Measures:

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

9. Approaches to Calculations

A separate policy outlines how we at Holme St Cuthbert School have agreed to teach calculations including fractions, through mental maths and written work. Please refer to our Hamilton 'Calculation Policy' for guidance in the methods a child will be taught and also the progression in methods.

10. Mathematical language and vocabulary

Teachers will refer to New National Curriculum and the glossary of terms when planning for a new topic to ensure that they are teaching the children the correct mathematical terms and language. The relevant vocabulary will be recorded on the weekly planning sheets and will be clearly displayed on Working Walls within the classroom so that the children can see and refer to it. Children will be encouraged to use the correct mathematical language and terminology to discuss their mathematics and to explain their reasoning.

11. Computing (formerly known as Information and Communication Technology – ICT)

Children use and apply mathematics in a variety of ways when solving problems using computing. Younger children can use computing to communicate results with appropriate mathematical symbols. Older children can use computing to produce graphs and tables when explaining their results or when creating repeated patterns, such as tessellation. When working on control, children use standard and nonstandard measures for distance and angle. They use simulations to identify patterns and relationships. All children use Maths games to reinforce mathematical concepts.

12. The Learning Environment

Within the classroom we aim to provide a stimulating environment, with children's work celebrated on a 'Marvellous Maths' display. Every classroom has a Maths Working Wall which aims to support all children in the learning they are currently involved in. Working walls must be kept up to date and relevant to what the children are learning. Learning objectives and vocabulary will also be clearly displayed, along with the success criteria relevant for the topic being taught. Wherever possible, we encourage the use of the outdoor environment as well as the classroom.

Ensuring that children understand the purpose for maths in the real world context is also central to our school's aim. Outside learning is a key part of this, where children can apply their knowledge beyond the walls of the classroom.

Every class should have a well organised maths area which is clearly accessible and labelled in order to encourage independence for our children. We want to encourage children to choose the resources that they need independently. Resources such as number lines and number squares, relevant to the children's current level of attainment, should be clearly displayed and also available on the children's desks or in their exercise books.

13. Homework and Parents

The daily maths lesson will provide opportunities for children to practise and consolidate their skills and knowledge, to develop and extend their techniques and strategies and to prepare for their future learning. These will be extended through homework activities. These activities will be short and focussed and will be referred to and valued in future lessons as stated in the school's homework policy. Children will also be expected to learn their times tables as part of their homework as this will be tested weekly in maths lessons. The three way partnership between parents, the school and the child, is essential to fully realising each child's potential in maths.

The school website is a useful source of helpful information for both parents and children.

14. Cross-curricular Activities

Maths contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to use and apply mathematics in real life contexts. For example in English – reading, writing, speaking and listening are actively promoted e.g. children have to read and interpret word problems and identify the mathematics involved. Children explain and present their work, discussing the mathematics

behind what they have done. Younger children enjoy stories and rhyme that rely on counting and sequencing. Older children encounter graphs and charts through Non-fiction texts. In Spiritual, Moral, Social and Cultural development, the way we teach maths supports the social development of our children through the way in which we encourage and expect them to work together in lessons. Children experience real life problems such as finding the best value product or investigating the value of retail promotions such as 'BOGOF' compared to '3 for 2'. In some instances, children are involved in 'Enterprise' activities which encourages them to decide how to spend a budget then create, brand and cost a product in order to make a profit. Children actively used these skills during our 'Party Party' and Christmas fayre days.

15. Assessment and Target Setting (see also assessment and marking policy)

Informal observations will be made daily by the class teacher with planning adjustments to be made as necessary. Feedback will be given to children verbally or in writing in children's exercise books. We recognise the importance of responding to children's work to provide praise, support, encouragement and feedback as outlined in the school's marking policy. These include oral feedback, written feedback and peer feedback/assessment. Children will be encouraged and given time to respond to 'Next steps in learning' which is aimed at moving their learning forward. If a child requires support with their learning, then a 'scaffolded' comment will be given where a child is shown how to do something in a series of steps then encouraged to try for themselves. Children's work will also be celebrated on display and shared within lessons. Assessment for Learning lies at the heart of promoting learning and in raising standards of attainment.

Assessments will take place at three connected levels: short term, medium term and long term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment.

15.1 Short term assessments will be an informal part of every lesson to check pupil's understanding and give the teacher information, which will assist in adjusting day-to-day lesson plans. These assessments will indicate if an objective needs to be revisited the following week and why.

15.2 Medium term assessments will take place in the assessment weeks which are planned into the timetable every half term and will assess some of the ideas linked with the key objectives which have been covered during that half term. The outcomes will be recorded on Scholar Pack (tracking progress.) Assessment tasks will be in the form of Rising Stars test papers, although a variety of examples of children's work across the curriculum may be taken into account by the class Teacher. This will inform future planning, class and individual learning targets.

15.3 Long term assessments will take place towards the end of the school year to assess and review pupil's progress and attainment against the National Curriculum descriptors. These will be made through compulsory National Curriculum Mathematics tests (SATs) in Year 2 and Year 6. Results from these assessments are recorded on Scholar Pack. Accurate information will then be reported to parents and to the next teacher.

16. Target Setting

During every unit of work, children will be set achievable but challenging targets relating to the objectives being covered. Children will be alerted to these objectives and they will be given the opportunity to self-assess against those key objectives within their maths books. It is every teacher's aim to ensure that all children have the opportunity to achieve the National Curriculum Objectives relevant to that child's year group.

17. Inclusion

We aim to provide for all children so that they achieve as highly as they can in maths according to their individual abilities. We will identify which pupils or groups of pupils are under achieving and take steps to improve their attainment. This identification will be in line with school assessment, pupil review, and SEND identification procedures and policy. Gifted children will be identified and suitable learning challenges provided through differentiation. Children and their families will be notified of any opportunities to attend Gifted and Talented days or events or of any additional support their child is receiving.

17.1 Intervention Programmes will be run according to need, and will be evaluated and reviewed annually. A variety of interventions will be used and adapted by the class teachers and teaching assistants to suit the needs of the children, taking the 2015 National Curriculum expectations into account.

18. Equal Opportunities

All children are provided with equal access to the maths curriculum. We feel that all pupils, irrespective of gender, ability, ethnic or cultural origins, should have equal access to all parts of the curriculum and that teaching and learning is structured so that each child has every opportunity to realise personal potential within mathematics. The daily maths lesson is appropriate for all pupils through differentiation.

19. Pupils with Special Educational Needs and Individual/Group Education Plans

Teachers will aim to include all pupils fully in their daily mathematics lessons. All children benefit from the emphasis on oral and mental work and watching and listening to other children demonstrating and explaining their methods.

20. Role of Subject Leader

The maths subject leader is responsible for monitoring the mathematics planning within our school. The governors take an active role in the subject of mathematics and are involved in visits to the school which include reviewing and scrutinising planning and marking.

The Subject Leader is responsible for improving the standards of teaching and learning in maths through:

Monitoring and Evaluating:-

- Ensure that teachers are familiar with the National Curriculum and help them to plan lessons where appropriate
- Lead by example by the way they teach in their own classroom.
- Prepare, organise and lead INSET, with the support of the Headteacher
- Work co-operatively with the SENCo
- Observe colleagues on a termly basis with a view to identifying any support they need.
- Attend INSET provided by CCC or local school while keeping up to date with recent maths related developments
- Inform parents about open days or curriculum evenings where appropriate
- Discuss regularly with the Headteacher and the Governor's responsible for maths, about the progress of implementing the New National Curriculum in the school.
- Review planning on a half termly basis
- To be accountable for the Maths budget

- Annually carry out a school audit of Mathematics, leading to a review of the Mathematics action plan.

- Feedback to Governors about attainment and progress

- Monitor and analyse targets, SATs and assessment results

Role of the Headteacher:

- Lead, manage and monitor the implementation of the New National Curriculum, including monitoring teaching plans and the quality of teaching in the classroom.

- With the Maths Governor, keep the governing body informed about the progress of the New National Curriculum.

- Ensure that Maths remains a high profile in the school's development plan

- Deploy support staff to maximise support for the New National Curriculum

Signed ***K Sargent*** (Maths Subject Leader)

Signed ***L Carini*** (Head Teacher)

Date: September 2017

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