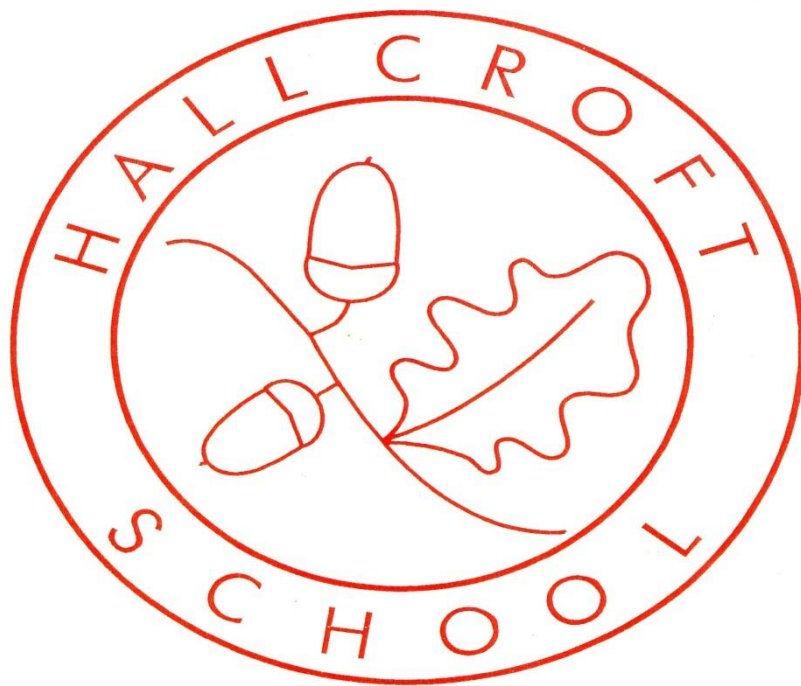


Hallcroft Infant & Nursery School



Mathematics Policy
January 2020

Hallcroft Infant and Nursery School Mathematics Policy

1. Introduction

The policy is based on the expectations and aims of the 2014 Curriculum for mathematics and the Early Years 'Development Matters' EYFS document. This ensures continuity and progression in the learning and teaching of mathematics.

2. Purpose

A high-quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. (DFE 2014)

At Hallcroft Infant and Nursery School we follow the Early Years 'Development Matters' EYFS document and the National Curriculum framework 2014, which provides detailed guidance for the implementation of all aspects of Mathematics. We encourage a positive attitude to mathematics and work towards developing cross-curricular links within the subject. We follow the White Rose Maths schemes of learning from Reception and into KS1.

3. Key Principles

The principles of Hallcroft Infant and Nursery Infant School for mathematics are:

- Policy and provision are evaluated and reviewed regularly.
- Resources of time, people and equipment are planned, budgeted for and detailed when appropriate in the School Development Plan.
- Cross-curricular links are incorporated where appropriate.
- Planning of mathematics ensures continuity and progression across all year groups.
- We ensure that all pupils make progress from their starting points, including those in vulnerable groups.

4. Aims

At Hallcroft Infant and Nursery School we aim to develop lively, enquiring minds encouraging pupils to become self-motivated, confident and capable in order to solve mathematical problems. We provide a stimulating environment and high quality resources so that children can develop their mathematical skills to their full potential.

We also present mathematics as a challenging, exciting, creative and relevant subject in order to promote a positive and confident attitude. We are committed to giving all of our children every opportunity to achieve their best by offering a broad and balanced curriculum and having high expectations for all children.

The 2014 National Curriculum for mathematics aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The Programmes of study for mathematics are set out year-by-year for Key Stages 1 and 2 in the National Curriculum (2014). The programmes of study are organised in a distinct sequence and structured into separate domains. Through following the sequences of learning as set out by White Rose Maths we are able to ensure coverage and progression within mathematics. Pupils should make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

5. Mathematic Curriculum Outcomes

Foundation Stage

Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Early Years 'Development Matters' EYFS document and in the White Rose Maths schemes of learning. Lessons in the Early Years aim to do this through varied activities that allow children to use, enjoy, explore, practise and talk confidently about mathematics.

Key Stage 1

The principal focus of mathematics teaching in Key Stage 1, based on the National Curriculum 2014 and the White Rose Maths schemes of learning, is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

Key Strands

There are key strands that give a broad overview of the mathematics curriculum in KS1. Developing fluency in these areas is vital in enabling children to recall and apply their knowledge rapidly and accurately to problem solving contexts. An emphasis on practice at this early stage will aid fluency.

The key strands are as follows.

NUMBER: Place Value, Addition and Subtraction, Multiplication and Division, Fractions

MEASUREMENT: Time. Money. Length. Mass / Weight. Capacity / Volume

GEOMETRY: 2D and 3D Shapes, Position and Direction

STATISTICS (Y2): Data Handling+-

Pupils should also be able to read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1.

Spoken language:

The National Curriculum 2014 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 their subject development, the focus on which begins in the EYFS. We work towards providing secure foundations for mathematical language by using discussion to probe and remedy their misconceptions.

Performance Indicators

- Children are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study, by the end of each key stage.
- Children enjoy mathematics.
- Children talk confidently about what they are doing in mathematics.
- Attainment in mathematics is tracked.

6. How the Subject is taught

At Hallcroft Infant and Nursery School we believe that children deserve

- To be set appropriate learning challenges.
- To be taught well and be given the opportunity to learn in ways that maximise the chances of success.

Our school curriculum:

In The Foundation Stage, Problem Solving, Reasoning and numeracy includes seeking patterns, making connections, recognising relationships, working with numbers, shapes, space and measures, and counting, sorting and matching. Children use their knowledge and skills in these areas to solve problems, generate new questions and make connections across other Areas of Learning and Development. All children are given ample opportunity to develop their understanding of mathematics which involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shape, spaces and measures. A strong emphasis is placed on the acquisition and development of mathematical language.

In KS1 the curriculum includes all the age related Programmes of study and incorporates the aims of the 2014 curriculum throughout.

We have a policy for progression in calculation methods for parent/carers, staff and pupils in order to ensure continuity and consistency.

7. Planning and assessment

Planning, learning and teaching: (a typical lesson)

Short-term weekly planned activities are differentiated in order to provide children with increasing independence and challenge. When possible these activities will have real life connections or purposes.

Questioning is used to challenge and to assess.

Mental mathematics should be incorporated throughout all lessons and mental strategies for solving all mathematical concepts will be discussed and developed based on continuous assessment for learning.

Assessment

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. This is mainly achieved through observation, mini-plenaries, questioning, TA feedback and pupil self-assessment, marking and completed work.

The main purpose of our marking policy is to ensure that as children progress through the school they benefit from constructive guidance and next step questioning to challenge and consolidate their learning further. Children are encouraged to respond to teacher marking (verbal and written) through making corrections when necessary and to respond to marking through additional challenges.

Targets

All Foundation Stage children have target pencils which are updated half termly.

8. Roles and Responsibilities

The role of the Head Teacher

At Hallcroft Infant and Nursery the Head Teacher will:

- Ensure a whole school approach.
- Keep governors, staff and parents well informed about mathematical matters.
- Provide the necessary support and resources.
- Use assessment and other data to set statutory and curriculum targets.
- Monitor the quality of Mathematics teaching.

The Role of the Governors

At Hallcroft Infant and Nursery School mathematics is reviewed by various governors who are monitoring the quality of teaching and provision with reference to the school development plan.

The role of the Subject Leader team

The subject leader for Mathematics is responsible for coordinating mathematics through the school. This includes

- Ensuring continuity and progression from year group to year group and across parallel classes.
- Attending co-ordinator's meetings and feeding back at staff meetings.
- Advising and supporting colleagues in the implementation and assessment of mathematics throughout the school.
- Assisting with requisition and maintenance of resources required for the teaching of mathematics, within the confines of the school budget.

The role of the class teacher

- To ensure progression in the acquisition of mathematical skills with due regard to the National Framework for Mathematics.
- To develop and update skills, knowledge and understanding of mathematics.
- To identify INSET needs in mathematics and take advantage of training opportunities.
- To keep appropriate on-going records.
- To plan effectively for mathematics (with parallel class partners), liaising with subject leader when necessary.
- To inform parents of pupil's progress, achievements and attainment.
- To identify children who require additional support.
- To liaise with TAs to ensure high quality provision and consistency.

The role of the SENCO and support staff

- To work with the Maths Co-ordinator and Learning Support Teacher to plan provision for children with SEN.
- To use objectives in the framework or the P levels to prepare Provision Maps.
- To be familiar with the framework.

Differentiation and support:

This is incorporated into all mathematics lessons and is done in various ways, such as:

- Setting challenging age related knowledge, reasoning and problem solving tasks based on systematic, accurate assessment of pupil's prior skills, knowledge and understanding.
- Small, differentiated target steps for all children to move through at a pace that suits their needs.
- Timely support and intervention; systematically and effectively checking pupil's understanding throughout lessons.
- Ensuring that marking and constructive feedback is personal and of a consistently high quality - enabling pupils to understand how to improve and develop their work - with planned in time for children to respond to feedback.
- Range of practical real-life resources used to support all stages of learning within the class.
- Regular differentiated homework is set.
- Intervention programmes/extra teacher support delivered where needed both in class and through extra sessions planned outside the sessions.

9. Inclusion/Equality

Every child has an entitlement to a broad, balanced, meaningful and relevant maths curriculum. We recognise that each child is unique in terms of characteristics, interests, abilities, motivation and learning needs. Our school aims to be an inclusive school. We actively seek to remove the barriers to learning and participation that can hinder or exclude pupils. This means that equality of opportunity must be a reality for our children. We ensure this by tracking, monitoring and targeting the different individual and groups of children within our school to ensure minimal risk of underachievement.

We incorporate mathematics into a wide range of cross-curriculum subjects. All children have equal access to the curriculum regardless of their gender, race, cultural background or disability.

10. Cross-curricular Links

Whilst teaching the core programmes of study we take every opportunity to apply mathematical knowledge in other subjects.

11. Engagement with Parent/Carers

At Hallcroft Infant and Nursery School we encourage parent/carers to be involved by

- Inviting them into school twice-yearly to discuss the progress of their child.
- Inviting them into school in the summer term to discuss the yearly report.
- Inviting them to curriculum meetings or circulating information via newsletters.
- Encouraging parents/ carers to help in classrooms.
- Keeping parent/carers informed verbally about children's progress, including what they are good at and what they need to improve.

12. Monitoring, Evaluation and Review

The monitoring of the standards of children's work and the quality of learning and teaching mathematics is the shared responsibility of the SLT and the subject leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school.