



ALLENDALE PRIMARY SCHOOL

MATHEMATICS POLICY

Introduction:

The purpose of this policy is to ensure a consistent and high-quality approach to the teaching and learning of mathematics at our primary school. We aim to inspire all children to develop a love for mathematics and see the relevance of it in their everyday lives.

Rational:

We live in a complex, high technology society, where a wide range of mathematical concepts and skills is needed, both in work and non-work situations. At Allendale Primary School we recognise the importance of Maths in daily life and therefore strive to make Maths relevant and engaging for pupils, so that they leave with a solid foundation and deep conceptual understanding of the importance of Maths. We want our Maths curriculum to be engaging and stimulating to allow children to explore mathematical concepts and be active in their learning process.

Maths is:

- A search for patterns and relationships
- A way of thinking
- A means of communication
- A creative activity, involving invention, intuition and discovery

Doing maths involves:

- Deciding which questions, problems, investigations, hypotheses
- Gathering relevant information
- Creating mathematical models or an algorithm
- Manipulating models or carrying out algorithms
- Interpreting or explaining results
- Communicating the findings

Aims:

The National Curriculum for Mathematics 2014 aims to ensure that all pupils achieve. Maths is a core subject in the National Curriculum. Mathematical understanding is also required in most other National Curriculum subjects, for example, Science, Technology, Geography etc.

At Allendale Primary School, we design our teaching and learning so that all children can achieve these aims:

- To ensure that all pupils become fluent in the fundamentals of mathematics 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.
- To develop pupils' ability to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations and developing justification or proof using mathematical language.
- To encourage pupils to 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.

- All pupils to achieve their full potential irrespective of race/gender/class/ability
- To foster a love of maths
- To foster the development, consolidation and application of maths concepts, skills and facts
- To develop quick recall of basic number facts based on understanding
- Pupils to apply mental methods, making jottings in support, visualising to 'see' structures and solutions, testing strategies and developing ideas
- To develop understanding through a process of enquiry and experiment
- To develop the ability to think clearly and logically to find a way through problems and investigations where strategies are not immediately obvious
- To develop pupil's ability to work independently, collaboratively, systematically and with persistence
- To develop pupil's ability to communicate information and ideas, orally, graphically and symbolically, using precise mathematical language
- Pupils to see the relevance of maths to everyday problems and situations, and its cross curricular links
- To develop an appreciation of patterns and relationships throughout maths
- Pupils to have a positive attitude to maths and confidence in their mathematical ability
- Pupils to listen to others and speak with clarity and confidence, persevering and expecting to learn and enjoy the challenge of tackling something new

As a school we are working on developing a positive approach and encouraging resilience. This is aimed to foster a positive attitude and love of learning in all pupils. Children are given opportunities to explore different concepts and to learn from their mistakes. They work together to learn and help one another to deepen their understanding. Questioning is aimed at promoting learning goals not performance, with a focus on developing key skills.

Teaching and Learning:

- Our curriculum is designed to ensure that all pupils have access to a broad and balanced mathematics education.
- The curriculum is structured around the National Curriculum for Mathematics, using White Rose and NCETM resources and principles.
- Teachers will use a variety of teaching methods to cater to the varied learning styles of our pupils.
- Lessons will involve a mix of whole class, group, and individual activities.
- Teachers will regularly check pupils' understanding and progress during lessons.
- We will provide equal opportunities for all pupil's to learn maths irrespective of race /gender /class /ability and have high expectations for all. To achieve this, we use a 'Mastery' approach to our lessons whereby children are taught through whole-class interactive teaching where the focus is on all children working together on the same lesson content at the same time to master the content of the National Curriculum 2014.
- Ensure maths is taught as a daily maths lesson and therefore receives a specific time allocation of 5 hours per week, flexibly organised
- Explore new mathematical concepts using a CPA (Concrete, Pictorial and Abstract) approach to allow pupils to spend longer on key mathematical concepts in particular number to develop a deep knowledge of key ideas.
- Provide opportunities for children to explore using concrete objects and manipulatives to help them understand the Maths concept, and then make use of pictorial representations (diagrams, graphs) to help children reason and problem solve.

- Both concrete and pictorial representations should support children's understanding of abstract methods.
- Develop fluency by providing daily mental maths opportunities in 'maths moments' to ensure quick recall of bonds/tables/x ÷ by 10 100 1000.
- Ensure all pupils participate in whole-class, group and independent activities that involves: speaking and listening, practice, application, challenge and reflection.
- Plan which elements of the programmes of study can be delivered through cross - curricular topic work, remembering the need for continuity and progression
- Structure progression in learning, modelling and integrating talk together with use of procedures, diagrams and notation to secure pupils' oral, mental and recording skills
- Analyse data to inform teaching and learning.
- Require pupils to record their work in maths books which are accessible in the class.
- Introduce correct mathematical terminology as appropriate.
- Encourage pupils to explain their maths orally as well as on paper. Develop the oral skills within maths which include explanation, discussion, reasoning and questioning as well as written maths.
- Set aside time for pupils to respond to marking and do corrections.

We are developing and embedding mastery approaches and pedagogy. Our curriculum is structured into blocks to sufficient time to allow children to practice, refine and deepen skills and concepts. Objectives are ordered and sequenced to allow children to make links within and across units of work.

Basic skills are addressed through starter activities and weekly arithmetic sessions; focuses for these are drawn from formal and informal teacher assessments.

As a school we do not follow a set scheme of work, however, in planning, staff use their professional judgement to adapt schemes and other resources which they feel meet the needs of the children in their class, such as White Rose and NCETM resources.

We believe that parents have a critical role in supporting their children's mathematical development and attitude to maths. We encourage parents to be involved in their child's learning through homework activities and parent workshops.

Assessment:

EYFS

Mathematics is one of the specific areas of learning in the EYFS curriculum and covers the following aspects:

1. Numbers
2. Numerical Patterns

Withing the first 6 weeks of starting school, pupils are assessed using the Reception baseline. During the year, pupils are assessed against the Early Learning Goals and progress measured to ensure a good level of development.

Key Stage 1

Key stage 1 staff use teacher assessment, with judgements formed from observations in lessons, working in children's book and discussions with children.

Judgements are recorded on a tracking sheet and used to identify gaps in learning, which can then be addressed in basic skills sessions.

Tracking grids are submitted half termly to the Assessment Coordinator, along with any formal assessment results.

At the end of KS1, pupils undertake a SAT in maths. In 2024, this will no longer be statutory but we intend to still use these assessments to measure progress, outcomes and identify areas to consolidate.

Key stage 2

NFER test materials are used in Year 3-5. Baselines are established at the end of the previous academic year. Tests are then administered in February and July to track progress and identify any gaps.

In Year 6, practice SAT papers are administered each half term, to track progress and identify gaps over shorter periods of time.

The results of formal assessments are kept by the class teacher and submitted to the HT and assessment co-ordinator for tracking progress purposes and identifying any year group / whole school issues. The responsibility for marking and recording formal assessments lies with the class teacher.

Resources

Resources in our school are used to support learning in lessons. These include manipulative, such as: Numicon, Deans, place value counters, number lines, tens frames and bead strings. We also use more specific resources for teaching topics, such as weights and scales, meter sticks and measuring cylinders for learning about measures. Most of these resources are stored centrally in the maths cupboard in the staff room.

Maths Policy
October 2023

Review date
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