



Sheldwich Primary School

Policy for Mathematics

Introduction

This policy outlines the aims, organisation and management for the teaching and learning of mathematics at Sheldwich Primary School.

It is based on Excellence and Enjoyment, the Revised National Curriculum 2014 (NC) Programmes of Study (PoS) and the White Rose scheme of learning.

Aims

Mathematics is a life skill. It is an essential element of communication, widely used in society, both in everyday situations and in the world of work. "A high-quality mathematics education therefore 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." (*National Curriculum 2014*)

Our aims focus on equipping pupils with the mathematics they need to master the curriculum for each year group which requires that all pupils:

- to recall key number facts with **speed and accuracy** and use them to calculate and work out unknown facts;
- to develop their ability to **apply** mathematical skills with confidence and understanding when **solving problems**.
- to apply 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
- to express themselves and their ideas using the **language of mathematics** with assurance.
- to have sufficient depth of knowledge and understanding to reason and explain mathematical concepts and procedures and use them to solve a variety of problems.
- to develop positive attitudes to mathematics, recognising that mathematics can be both useful and enjoyable.
- to nurture a fascination and excitement of mathematics
- to be able to **use and apply** the skills in other curricular areas.
- to be able to show good reasoning skills.

All of these must be age appropriate and within the PoS for their year group.

Teaching Mathematics

A typical 60 minute lesson will include:

- Arithmetic and recall of number bonds and times tables
This will involve whole-class or group work to enable children to become fluent in mental and oral maths skills.
- A main teaching activity

This will include both teaching input and pupil activities and a balance between whole class, guided group work, paired and individual work according to need. There will be a focus on reasoning and problem-solving.

Children may work in a variety of ways according to the intended learning outcome.

- Mini-plenaries throughout the session which may involve work with the whole class to refer back to Learning Objective and/or Success Criteria, address misconceptions, identify progress, to summarise key facts and ideas, clarify what needs to be remembered, to make links in other work and to discuss next steps in learning.

Teaching strategies

In order to provide the children with active and stimulating learning experiences, a variety of teaching and learning opportunities are adopted:-

- Children may work individually on a task, in pairs or in a small group, depending on the nature of the activity.
- Wherever possible, practical 'real-life' activities are used to introduce concepts and reinforce learning objectives.
- Opportunities to transfer skills learnt, to real situations, are used whenever possible.
- Activities are planned to encourage the full and active participation of all pupils.
- Teachers use a 'Teach for Mastery' approach, where children's depth of knowledge and regular reinforcement of learning is prioritised. Teachers differentiate tasks throughout the lesson to meet the needs of all abilities, by using different resources or manipulatives. Self-differentiation is used regularly in order for children to challenge themselves.
- Teachers place a strong emphasis on correct use of mathematical language; this is supported by key vocabulary being displayed on the mathematics 'Working Wall'.
- All year groups will use manipulatives and children will be encouraged to access these independently when appropriate.
- Teachers value pupils' oral contributions and create an ethos in which all children feel they can contribute.
- Throughout the school there is a strong emphasis for children to learn number facts and times tables (appropriate PoS).
- Reasoning and problem solving skills are taught explicitly by teachers as part of mathematics lessons in order to model the use of correct mathematical vocabulary and written reasoning.

Teaching methods and approaches

In order to provide the children with active and stimulating learning experiences, a variety of teaching and learning opportunities are adopted:

- Children may work individually on a task, in pairs or in a small group, depending on the nature of the activity.
- Groupings are flexible either by ability, mixed ability or self-differentiated.
- The school has a clear and agreed 'Calculation Policy'.
- Computing is used where appropriate by teachers and pupils to support teaching and learning in Mathematics.

Differentiation Strategies:

'Teaching for Mastery' aims to help all children succeed together, where a depth of knowledge, with regular reinforcement of prior learning is prioritised. Therefore it is important to note that differentiation does not mean 'different work' but instead refers to the wide variety of resources,

teaching styles, classroom activities and support materials that can be used by teachers to help make the curriculum accessible and allow pupils to progress within their lessons.

Curriculum Planning

Medium Term Planning

Teachers use the National Curriculum, in conjunction with the White Rose scheme of learning, to plan teaching sequences that build learning over time. The emphasis is to develop a sequence of teaching and learning that encompasses the cycle of assess, plan, teach, practise, apply, and review through every unit. A strong emphasis on Using and Applying, including Reasoning in mathematics is embedded within the curriculum.

Short term planning

- A whole school weekly proforma is used to plan learning over a week.
- These plans must include learning objectives, outline activities for the mental and oral, whole class teaching focus, differentiation, use of ICT, key questions, Learning Questions (where appropriate) and key vocabulary.
- Planning clearly shows the Class Teacher and Learning Support Assistants to work with children following the previous lesson's assessment.
- Teachers evaluate their plans daily, making notes on pupils who have exceeded or not achieved expectations (noted in 'Teacher Planner' and teacher marking book). Annotations are made daily on the plans by both class teachers and teaching assistants.
- HT monitors weekly Mathematics planning.

Assessment, recording and reporting

Assessment takes place at three connected levels: short-term, medium-term and long-term. These assessments are used to inform teaching in a continuous cycle of planning, teaching and assessment.

Day-to-day assessments

As part of the ongoing teaching and learning process, teachers will assess children's understanding, achievement and progress in mathematics. Daily annotations which inform day to day teaching and learning are based on observation, questioning, informal testing and the marking and evaluation of work. This will also enable appropriate feedback to children in the following lesson. Developmental/Next step comments will be made in children's books and opportunities to work on these will be provided. Learners will also be taught to assess and evaluate their own achievements by recognising successes, learning from their own mistakes, identifying areas for improvement and responding to Learning Questions. Success criteria will be provided for each child daily and children will regularly use these to help them to self-assess their own learning. Class teachers for Years 1-6 will input a mathematics level of attainment: Emerging, Expected or Exceeding on to the School's tracking system. This information is used by the Senior Leadership Team during Pupil Progress Reviews and is monitored closely to ensure all pupils are making progress.

Moderation meetings

The process of moderation is an essential part of a robust assessment system. Teachers are involved in moderation of EYFS, and core subjects in KS1/2 in the following ways:

- With colleagues in school during focused professional development staff meetings
- With colleagues from the collaboration (Luddenham and Graveney)
- Via attendance at statutory LA meetings
- Via LA representatives coming into school for moderation

Summative assessments

RBA (Reception Baseline Assessment)

PUMA Maths Assessments (each year group)

Year 4 Multiplication Tables Check

Year 6 SATs

Equal Opportunities

All pupils will have equal opportunity to reach their full potential across the mathematics curriculum regardless of their race, gender, cultural background, ability or physical disability.

Inclusion

The school's equal opportunities policy applies to the teaching of mathematics as to all other subjects.

Environment

It is important that the classroom environment supports both the learning and teaching of mathematics.

The school aims to provide a mathematically stimulating environment:

- through the use of working walls to support learning and teaching in a lesson or series of lessons.
- through interactive displays that promote mathematical thinking and discussion
- through displays of pupils' work that celebrate achievement,
- by providing a good range of resources and manipulatives for teacher and pupil use.

Homework

We recognise the importance of making links between home and school and encourage parental involvement with the learning of mathematics.

Homework provides opportunities for children:

- to practise and consolidate their skills and knowledge of mental arithmetic methods,
- to share their mathematical work with their family
- to prepare for their future learning.

See **Homework** policy for further details.

This policy has been reviewed in line with the Single Equality Scheme and does not have a negative impact on one or more of the dimensions of equality.

To be reviewed: Sept 2025