Lostock Hall Community Primary School

Policy for Mathematics

Document Purpose

This document reflects the values and philosophy of Lostock Hall Community Primary School in relation to the teaching and learning of Mathematics. It provides a framework, within which teaching and non-teaching staff work, and gives guidance on planning, teaching and assessment.

The policy should be read in conjunction with the *2014 National Curriculum for Mathematics and the Revised Statutory Framework for the EYFS (2021) and the Development Matters EYFS Framework,* which has been adopted by the school. This should enable teachers to design a programme of activities that is responsive to their own and children's skills and needs in Mathematics at that particular time.

Audience

This document relates to children in Key Stages 1 and 2. The children in the Nursery and Reception Years follow the Early Learning Goals for Mathematical Development which can be found in the school's Policy for the Foundation Stage.

This policy is intended for all teaching staff and staff with classroom responsibilities, the School Governors, parents, inspection teams and LEA Advisers.

Philosophy

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore. Mathematics helps children to make sense of the world around them through developing their ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Throughout the whole curriculum, opportunities exist to extend and promote mathematics. Teachers seek to take advantage of all opportunities.

At Lostock Hall CPS Primary School we aim to:

- develop a positive attitude to mathematics as an interesting and attractive subject in which all children gain success and pleasure
- develop a deep mathematical understanding through small step learning objectives and key skills
- encourage the effective use of mathematics as a tool in a wide range of activities within school and, subsequently, adult life
- develop an ability in the children to express themselves fluently, to talk about the subject with assurance, using correct mathematical language and vocabulary
- develop an appreciation of relationships and connections within mathematics
- develop ability to think clearly and logically with independence of thought and flexibility of mind
- develop an appreciation of creative aspects of mathematics and awareness of its aesthetic appeal
- develop Number Sense, efficiency and fluency

Intent

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of Mathematics
- Are able to reason mathematically
- Can solve problems by applying their Mathematics

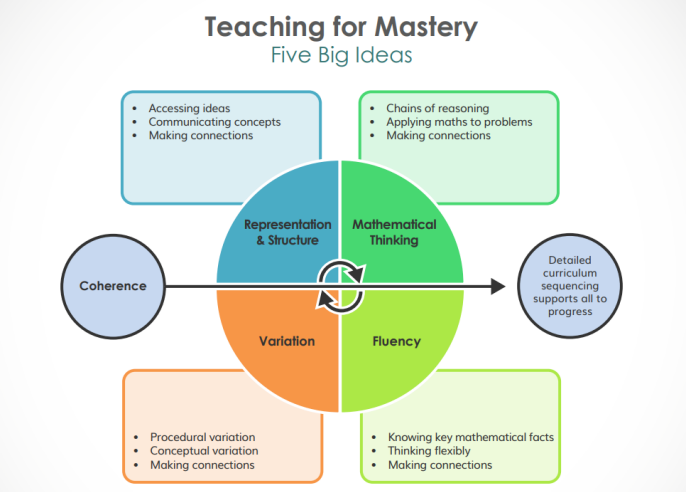
At Lostock Hall CPS, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Implementation

At Lostock Hall CPS we follow the Teaching for Maths Mastery Principles:
Mathematics teaching for Mastery assumes everyone can learn and enjoy mathematics.
Mathematical learning behaviours are developed such that pupils focus and engage fully as learners who reason and seek to make connections.
Teachers continually develop their specialist knowledge for teaching mathematics, working collaboratively to refine and improve their teaching.
Curriculum design ensures a coherent and detailed sequence of essential content to support sustained progression over time.

Lesson Design
Lesson design links to prior learning to ensure all can access the new learning and identifies carefully-sequenced steps in progression to build secure understanding.
Each class organises a daily lesson of between 45 and 60 minutes for mathematics. Mathematical development is taught in a holistic way wherever possible at the Foundation Stage.
Examples, representations and models are carefully selected to expose the structure of mathematical concepts and emphasise connections, enabling pupils to develop a deep knowledge of mathematics.
Procedural fluency and conceptual understanding are developed in tandem because each supports the development of the other.
It is recognised that practice is a vital part of learning, but the practice must be designed to both reinforce pupils' procedural fluency and develop their conceptual understanding.

In the classroom
Pupils are taught through whole-class interactive teaching, enabling all to master the concepts necessary for the next part of the curriculum sequence.
In a typical lesson, the teacher leads back-and-forth interaction, including questioning, short tasks, explanation, demonstration, and discussion, enabling pupils to think, reason and apply their knowledge to solve problems.
Use of precise mathematical language enables all pupils to communicate their reasoning and thinking effectively.
If a pupil fails to grasp a concept or procedure, this is identified quickly, and gaps in understanding are addressed systematically to prevent them falling behind.
Significant time is spent developing deep understanding of the key ideas that are needed to underpin future learning.
Key number facts are learnt to automaticity, and other key mathematical facts are learned deeply and practised regularly, to avoid cognitive overload in working memory and enable pupils to focus on new learning.
Behind all Teaching for Mastery principles are the Five Big Ideas in Teaching for Mastery:



Impact

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Mathematics because they think they can't do it or are not naturally good at it. The Maths programme addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we are able to maintain high standards, with achievement at the end of KS2 above the national average and a high proportion of children demonstrating greater depth, at the end of each phase

Inclusion

At Lostock Hall CPS we are committed to providing a high-quality mathematics education that is accessible and inclusive for all students, ensuring that every student has the opportunity to succeed in mathematics, regardless of their background, learning ability or specific needs. Through differentiated instruction, targeted interventions, and a focus on creating an inclusive learning environment, we aim to foster a love of mathematics in all students and provide them with the skills and confidence to succeed.

Aims

- To ensure that all students, including those with special educational needs (SEN), disabilities, and those from diverse cultural backgrounds, can fully participate in mathematics lessons.
- To provide appropriate resources, support, and differentiation that meets the diverse needs of students.
- To foster an inclusive and positive learning environment where all students feel valued and confident in their mathematical abilities.
- To ensure that all students are given equal opportunities to achieve their potential in mathematics.

Inclusive Classroom Environment: Teachers will create a positive and inclusive classroom culture where every student has equal access to mathematics curriculum content and is encouraged to participate, collaborate, and share their ideas. Pupils will be supported to develop a growth mindset towards learning mathematics, understanding that making mistakes is a natural part of the learning process. Teachers will tailor their lessons and resources to meet the diverse needs of all students. This includes using visual aids, manipulatives, and practical activities to help students of all abilities understand mathematical concepts.

Support and Intervention: Additional support will be provided for students who need it, including those with specific learning difficulties, disabilities, or language barriers. This may include small-group work, one-to-one support, and additional time for certain tasks or assessments. We will take into account the individual learning styles, strengths, and interests of each student, ensuring that their mathematical learning experience is engaging and relevant.

Professional Development: Teachers will receive ongoing professional development on inclusive teaching practices, strategies for differentiating mathematics instruction, and how to support students with diverse needs.

Monitoring and Review

- Reviewing student progress and outcomes in mathematics, with a focus on those with additional needs.
- Gathering feedback from students, parents, and staff about the inclusivity of the mathematics curriculum.
- Conducting regular reviews of teaching practices and curriculum content to ensure they are meeting the needs of all students.

Planning & Curriculum

- Learning objectives are clear and accessible to all pupils.
- Tasks are tiered or adapted to allow varied entry points.
- Concepts are planned using the **Concrete–Pictorial–Abstract (CPA)** model.
- Key vocabulary is pre-planned, displayed, and explicitly taught.
- Opportunities for problem solving and reasoning are built in for all levels.
- Tasks represent diverse cultures, real-life contexts, and pupil interests.
- Anticipated misconceptions listed
- Pre-teaching opportunities identified (vocab, methods, models)

Classroom Environment

- Visual supports available (number lines, place value charts, 100 squares, bar models).
- Manipulatives accessible to all pupils (counters, base-ten blocks, cubes, clocks, fractions).
- Working walls show worked examples and models.
- Tables and seating arranged to allow pupil movement and collaboration.
- Resources are labelled clearly with symbols and words.
- Noise, lighting and layout adjusted to reduce sensory overload.

Instruction & Teaching Strategies

- Explanations are broken into manageable steps to reduce cognitive load.
- CPA approach every lesson (objects → diagrams → symbols)
- Low threshold, high ceiling tasks
- Flexible grouping that changes based on skill, not fixed “ability”
- Use of multiple representations of the same concept (objects, drawings, symbols).
- Teacher “thinks aloud” to model strategy and reasoning.
- Opportunities for **guided practice** before independent work.
- Use of mini-whiteboards for low-stakes checking of understanding.
- Clear routines: “I do – We do – You do”.
- Opportunities for discussion and reasoning
- Alternative means of recording (drawing, objects, verbal explanation)

Recording of Pupils Work

Children are taught a variety of methods for recording their work (see calculations policy) and they are encouraged and helped to use the most appropriate and efficient method of recording There are occasions when it is both quick and convenient to carry out formal written calculations. It is also important to record aspects of mathematical investigations. Children are encouraged to use mental strategies before resorting to a written algorithm.

Assessment and Monitoring:

The assessment procedures within our school encompass:

- Adjusting planning and teaching within units in response to pupils' performance.
- Use of ongoing teacher assessment in order to identify gaps in attainment on a regular basis and at the end of each full term using this information to 'sub level' a child's attainment using the low, secure and high judgements.
- Use of information gained from statutory and optional tests. Analysis is done at both a quantitative and qualitative level. Information gained is used to set focused curricular targets and also to determine which strategies or methods are particularly effective in respect of specific areas of mathematics.
- Regular formative assessments will be used to track student progress and identify areas where students may require additional support. Data from these assessments will be used to adjust teaching strategies and inform intervention plans

Assessment for Learning

- Teacher circulates and gathers real-time feedback during tasks.
- Hinge questions or quick checks used before moving on.
- Misconceptions identified and addressed promptly.
- Feedback is specific and actionable
- Success criteria shared in pupil-friendly language

Differentiation & Support

- Pre-teaching or same-day intervention offered for pupils who need extra support.
- Stretch/challenge tasks provided that emphasise reasoning, not just harder numbers.
- Scaffolds available (word banks, partially completed examples, step-by-step prompts).
- Alternative ways to record work allowed (oral explanation, diagrams, manipulatives).
- Teaching Assistant support is planned and purposeful, not ad hoc.
- EAL learners supported with language frames and visuals.

Language & Communication

- Mathematical vocabulary displayed and used consistently.
- Sentence stems available
- Pupils encouraged to explain thinking using talk partners.
- Time provided for processing and discussion, not just quick answers.

Behaviour, Motivation & Wellbeing

- Growth mindset promoted—effort, strategies and perseverance are praised.
- Mistakes treated as learning opportunities; fear-free climate for risk-taking.
- Clear behaviour expectations and predictable routines.
- Short, varied activities to support attention and engagement.
- Opportunities for pupils to choose tools or methods that work best for them.

Home & Community Links

- Simple methods shared with parents so approaches are consistent.
- Homework or home activities differentiated and accessible.
- Real-life maths activities encouraged
- Reports are completed in Spring and Summer terms with parents given the opportunity to discuss their child's progress at Parent's Evening
- When significant changes have been/are made to the mathematics curriculum, parents are invited to a meeting or sent information via the newsletter.
- Year group mathematics support booklets for parents are regularly sent home

This policy will be reviewed annually to ensure that it remains relevant and effective in promoting inclusion in mathematics