

**HIGH LANE PRIMARY SCHOOL**

Mathematics Policy

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| **Date policy was agreed with Governors** | TBC |
| **Review Date** | September 2021 |
| **Person(s) Responsible** | K Lloyd  |

At High Lane Primary School, we value every child as an individual and believe it is important for all children to reach their full potential in a happy, supportive and exciting environment. We seek to develop independent learners who are equipped with the necessary skills, knowledge and understanding to thrive within an ever-changing world. We seek excellence and enjoyment in everything we do.

*Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. 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: Mathematics Programme of Study (2014)

**Aims**

At High Lane Primary, we recognise that our children’s chances of success are maximised greatly if they develop deep and lasting understanding of mathematical procedures and concepts. As a result, we encourage our pupils to be curious about mathematics, make connections between concepts and reason mathematically. We nurture analytical minds and confident communicators to tackle a range of practical tasks and real life problems. We therefore believe it is important to ensure mathematics is an inclusive subject where all children have the opportunity to thrive.

Our curriculum aims to provide children with the opportunity to:

* Become fluent in the fundamentals of mathematics, including through varied and fluent 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
* 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.

**Curriculum planning**

Teachers use the White Rose Maths scheme of work to plan lessons. Long term grids show which areas of maths are taught in each term; medium term grids show a further breakdown of what teachers aim to be covering each week. Short term plans make reference to specific resources that are required and any particular children that require adult support.

**Role of the subject leader**

In ensuring the quality of provision across the school, the subject leader, Kim Lloyd, is responsible for the following:

* Ensuring class teachers understand statutory requires for their year group and general progression of the mathematics curriculum
* Providing appropriate professional development, coaching and feedback for staff
* Leading whole-school monitoring and evaluation of teaching and learning in mathematics
* Analysing data in order to plan whole-school improvement projects
* Engaging with relevant statutory information and research on mathematics, disseminating key messages to staff
* Ensuring the school’s senior leadership team and governors are informed about the quality of teaching and learning
* Working in partnership with the school’s SENDCo to ensure the needs of all children in mathematics are met effectively
* Ensuring the school’s mathematics policy and progression documents are regularly reviewed

**Equal opportunities**

All mathematics lessons are made inclusive for all pupils. When planning lessons, teachers take into consideration any ITLPs or EHCPs for children in their class and ensure that their needs are considered and additional resources are sourced if required. Additionally, teachers take into consideration the range of learning styles in their classroom and adopt appropriate teaching strategies to suit.

Positive attitudes towards mathematics are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is a second language, develop an enjoyment and confidence with mathematics. The aim is to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons.

**High Lane Primary**

**What Mathematics looks like in our school**

**Our philosophy**

At High Lane, our Maths lessons:

* Develop confident children who can talk about their mathematical understanding
* Provide a range of activities that stimulate children’s curiosity and nurture their enjoyment
* Allow children to develop a deep understanding of mathematical concepts that they can use and apply across a range of situations
* Ensure children at every level are challenged and supported to reach their full potential

**What we do**

In order to provide effective teaching and learning opportunities, we:

* Plan and teach lessons in EYFS to meet the Early Learning Goals
* Plan and teach lessons in line with the National Curriculum and following the White Rose Maths scheme of work in KS1 and KS2, complementing lessons with a wide range of resources to promote mastery in maths
* Integrate the CPA (concrete – pictorial – abstract) approach to develop conceptual understanding
* Ensure lessons provide an opportunity to develop mathematical fluency, reasoning and problem solving skills
* Teach for mastery – we strive to ensure the children develop depth of knowledge and understanding in their mathematics work
* Develop conceptual and procedural fluency
* Make effective use of guided practice (teacher modelling and peer work) to promote metacognitive thinking
* Promote self-regulation, supporting children as they reflect on their own learning and identification of strengths and areas for development
* Recognise ‘mistakes’ as valuable learning opportunities
* Encourage children to share their own methods, their strengths and limitations
* Use a range of groupings in class to ensure children get the support they require

**What a typical lesson looks like**

We recognise that every class and child is unique, so maths lessons may vary slightly based on the needs of our children. All maths lessons might include:

* An opportunity to review prior learning
* Opportunities for children to solve problems using their own strategies
* Class teachers sharing effective models and strategies to introduce or support new learning
* Our class teachers modelling the application of new skills, sharing their own thought process with the children
* Paired work to support all and challenge all children
* High-quality maths talk, exploring the relationship between concepts and strengthening the children’s understanding
* Precise questioning to prompt children’s thinking, enabling them to develop their articulation of their conceptual understanding
* The use of a range of concrete objects, manipulatives or visual representations to support learning
* Independent practice to develop fluency and provide children with the opportunity to explore and rehearse concepts
* Problem solving and reasoning opportunities, offering children an opportunity to use and apply their conceptual understanding
* Reflecting and evaluating activities that allow our children to identify and learn from mistakes, and recognise next steps in their learning

**How we know our pupils are achieving**

From EYFS through to Key Stage 2, we use a range of strategies to ensure our pupils are on track and lessons are effective. We:

* Use focus groups to work with and observe children’s maths talk, supported by the class teacher or TA/LSA
* Observe children independently working in a group, noting key points to add to children’s learning journeys
* Take photographic evidence of practical maths, annotating where necessary
* Use a range of AfL strategies in class – thumbs up, self-assessment, peer-assessment
* Listen to pupil voice
* Share written and verbal feedback with the children
* Utilise end of term assessments that allow us to tailor intervention in order to address misconceptions
* Participate in standardised tests in all key stages

**How intervention is used at High Lane**

We recognise that sometimes children might require additional support or greater challenge to progress further in their learning. To support all pupils in their learning, we provide intervention in a number of ways:

* Integrated support within class with the class teacher or TA/LSA
* 1:1 or small group learning outside of the classroom with the class teacher or TA/LSA
* Bright Maths intervention, supporting children with their understanding of number
* Pre-teaching concepts so children have skills in place to understand the next phase of their teaching
* Concrete resources, manipulatives and examples of representations are always accessible in classroom and learning areas around school
* Maths vocabulary displayed clearly in classrooms and learning areas