



**MURDISHAW WEST COMMUNITY  
PRIMARY SCHOOL**

**MATHEMATICS POLICY  
AUTUMN 2022**

Policy Title	Mathematics Policy
School/HBC	School
This policy complies with Halton LA guidance	NA
Linked Policies & Documents	Teaching and Learning
Written By	M Jones
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## Intent

At Murdishaw West Community Primary School, we believe that students deserve a creative and ambitious mathematics curriculum, rich in skills and knowledge, which prepares them well for everyday life. We follow a carefully designed, planned and organised curriculum, to ensure coverage and progression for every learner.

Our children will be taught Mathematics in a way that ensures progression of skills, and follows a sequence to build on previous learning.

Teachers at Murdishaw West Community Primary School have been developing a mastery approach since 2014. Inspired by the exceptional performance of some Southeast Asian countries, school leaders researched the pedagogy and principles of mathematics teaching in Singapore through accessing top quality training from one of Singapore's leading teacher trainers. The approach has since been implemented at Murdishaw West Community Primary School since September 2016.

Our hope is for children of Murdishaw West Community Primary School to become confident mathematicians through varied and frequent practice, developing fluency, mathematical reasoning, and competence in solving increasingly sophisticated problems. Pupils will develop the ability to recall and apply knowledge rapidly and accurately.

## Implementation

Our curriculum is underpinned by a mastery approach, using a spiralling curriculum to build upon previous learning and embed knowledge and understanding. Concepts are broken down into small connected steps, allowing children to learn from modelling and practise the necessary skills needed to answer a range of problem solving questions. Manipulatives and pictorial representations are used to build and scaffold learning, with misconceptions addressed during lessons to ensure that children's knowledge is accurate. Effective questioning is used to get children thinking critically about a problem and the most efficient ways to work it out. Pupils are encouraged, through journaling, to express their thinking in a range of ways, using deliberate mistakes to prove their answers. All classes are taught maths on daily basis and our EYFS and KS1 children take part in an extra lesson called 'Mastering Number', which helps them to practise and master their number skills. Children from years 2 - 6 complete daily times table practise using Times Table Rock Stars.

In classrooms, you can expect to see high levels of pupil engagement and involvement. Lessons usually begin with

an interesting and engaging problem to solve and the teacher's role is to make this accessible to all. Pupil talk should be encouraged at every opportunity, enabling peer support, challenge and/or refinement of ideas. Teachers use pupils' ideas to create a series of class discussions using effective questioning based on the non-negotiables of the lesson. This helps children to reason and justify their choice of maths used to solve a problem.

Gifted learners are challenged from the outset, being asked to prove or justify their ideas, create real-life authentic problems of their own or seek patterns within the problem/concept being explored. For example, in a year 5 lesson where pupils have an opportunity to practise long multiplication, some pupils will already be secure using this algorithm. In this instance, you are likely to see these pupils being challenged to think of different combinations of numbers that produce the same product ( $7 \times 100 = 700$ ). In this way challenge is provided through deepening conceptual understanding rather than acceleration onto new content.

Journals and workbooks are used in most lessons. Journals are used to develop pupils' communication skills and record children's thought processes, therefore deepening conceptual understanding. Once children have had the opportunity to refine their thinking, they are expected to record this using diagrams/drawings, writing and abstract mathematical notation. Teachers' expectations of journals should be high, as should independence levels. Workbooks should be used to record children's independent practice.

Since September 2021 Maths No Problem has been introduced into the teaching and learning of EYFS mathematics. The scheme follows a similar approach to the rest of the school, in that it uses the concrete, pictorial, abstract approach, allowing the children to explore a concept and discuss this to highlight mathematical language and vocabulary. This will then support each cohort in the transition into Year 1, recognising some of the equipment and representations already being used.

## Impact

Our children enjoy and value mathematics and often talk about what they have been doing in lessons during celebration assemblies. Children will understand and appreciate the value of maths in the context of their personal and adult life. We hope their success in this area will lead to many career opportunities.

Progress in maths is demonstrated through regularly reviewing children's work to ensure that progression of skills is taking place. Children also complete formative and summative assessments after completing chapters in their Maths No problem workbooks and at the end of each term. Lesson walks also take place to ensure that they are being given the best opportunities to learn.

The maths curriculum allows children to consolidate and build upon prior learning, helping them to feel a sense of achievement and success in this curriculum area.

The curriculum will help them to become critical thinkers, with problem solving skills that are transferable through all subjects.