Mathematics Mastery

PARTNER SCHOOL 2015-16

# Mathematics Mastery at Maple

## A Parent's Guide

**Mathematics Mastery**
is an innovative maths teaching framework, supporting schools, students and teachers to be successful at maths.
Over 100 UK Primary and Secondary schools have already joined and become Mathematics Mastery partners. Mathematics Mastery is a charity that brings together schools, teachers and pupils who are committed to transforming maths attainment in the UK.

Our aim at Maple Infants' School is to ensure every child achieves excellence in mathematics.

**The Starting Point**

We have started teaching Mathematics Mastery in Year 1 and Reception will fully imbed the approach from January 2016.
The programme will be introduced into Year 2 in September 2016.
In addition to this leaflet, a **Mathematics Mastery Information Session** will be held early in 2016 to provide parents with more information about this exciting initiative.
For further Information about Mathematics Mastery, please visit:
**www.mathematicsmastery.org**

***What's new about the Mathematics Mastery approach?***

Actually, none of the individual aspects of the Mathematics Mastery programme is 'new'.
They are tried and tested successful approaches that the best teachers, departments and schools have been using for years.
However, what is special about Mathematics Mastery is that it brings these approaches and techniques together in a rigorous and systematic structure.

***What do the children think about Mathematics Mastery?***

Since beginning the programme at Maple Infants' School there has been a real 'buzz' about Mathematics learning.

***"Using objects helps me to understand maths more."***

***"I like maths, sometimes it's hard, but it helps me to learn it!"***

***"It's fun and not boring and I like talking with my talk partner."***

***"Maths Meetings are happy and you get to sing and learn lots."***

***"I like to learn maths because we learn adding and taking away – that's my favourite!"***

**The Curriculum**

The Mathematics Mastery curriculum has been developed to ensure every child can achieve excellence in mathematics.
It provides pupils with a deep understanding of the subject through a **concrete**, **pictorial** and **abstract** approach.
This ensures pupils fully understand what they are learning.

**Key features of our Mathematics Mastery curriculum:**

- High expectations for every child
- Fewer topics, greater depth
- Number sense and place value come first
- Research-based curriculum
- Objects and pictures always before numbers and letters
- Problem solving is central
- Calculate with confidence– understand why it works

Mathematics Mastery places emphasis on the cumulative mastery of essential knowledge and skills in mathematics.
It embeds a **deeper understanding** of maths by utilising a concrete, pictorial, abstract approach so that pupils understand what they are doing rather than just learning to repeat routines without grasping what is happening.

**Tracking Pupil Progress**

In Mathematics Mastery, assessment is continuous.
From the beginning of every lesson, teachers and teaching assistants assess what their pupils are, or are not understanding and use this to scaffold each segment of their lessons.
Interventions will be both planned for and 'live', meaning that misconceptions are dealt with immediately and high attaining pupils are challenged appropriately.
Children in Year 1 will also complete half termly summative assessments to support teacher's judgements and analyses of your child's progress.

**The National Curriculum**

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can 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.

The expectation is that **the majority of pupils will move through the programmes of study at broadly the same pace**.

Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

**Differentiation**

Differentiation should not be through accelerating through the curriculum or task modification in the traditional sense (making numbers bigger, providing more questions, making calculations 'harder' etc.) but that differentiation should be carefully planned and come from the three principles of Mathematics Mastery:

**Deepening mathematical understanding -** *having a deep conceptual understanding of mathematical concepts and skills*

**Deepening mathematical thinking -** *being able to question, sort, compare, and see patterns in mathematics*

**Deepening mathematical language –** *being able to explain, justify and prove using mathematical language*

Children should be encouraged to explore and investigate topics in greater depth, so they build a stronger understanding of the main maths concepts within that topic.

At Maple Infants' School, we believe that in order to differentiate successfully, so all children are supported and challenged, teachers should adapt tasks to suit the needs of their pupils.

Differentiation is built into the lesson resources by the teacher, as they know their pupils' progress and understanding best.