

Mathematics



IN A NUTSHELL



Writing Intention

The national curriculum states 'Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.' Therefore, the intention for mathematics is to ensure that all pupils become fluent, reason mathematically and solve problems. 'Pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.'

At King's Stanley Primary, we teach our children how to make sense of the world around them by developing their ability to calculate, reason and solve problems. We want our children to recognise and understand relationships and patterns in numbers in the world around them. We expect Mathematics to be utilised as a tool beyond the daily Mathematics lessons and beyond the classroom.

Implementation

We use 'Maths Mastery' as our main approach for the teaching of mathematics. At King's Stanley we employ a variety of teaching styles and opportunities for children to learn and develop their Mathematical skills and competencies. The primary focus of all lessons is to develop children's knowledge, understanding and skills of mathematics and being able to apply these to a variety of contexts. A comprehensive step by step planning over view (White Rose Maths) ensures the children are taught all strands of the national curriculum for maths. Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before. White Rose Maths is supplemented by all staff to ensure a personalised curriculum for all children where appropriate. If identified as a need, pre-teaching is given to pupils to support learning within the daily lesson.

- We use a CPA (concrete, pictorial, abstract) approach across all concepts.
- Concrete – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.
- Pictorial – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.
- Abstract – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence. Maths from Year 1 to Year 6.
- EYFS: All children in the Foundation Stage have daily opportunities to develop their mathematical understanding, primarily through play, to meet the needs of Development Matters. The two strands of Mathematics taught in the EYFS are Numbers and Numerical Patterns.

Daily Fluency, Kwik Maths and Times Tables

Daily fluency is practised across the school - called 'Fluent in Five'. Every day each class practises key elements of arithmetic to ensure continued fluency when looking at other mathematical concepts in the main teaching. Fluent in Five can be used to embed key understanding or give continued rehearsal of the four operations: addition, subtraction, multiplication and division.

Kwik Maths is a programme that we have adapted for use in our school. It supports the children's mental calculations. The children have a set of questions to answer in four minutes once every week. Initially they start with a small amount of questions and gradually progress through multiples of 11 until they reach the 99 club. We extended this to include bronze, silver, gold and then onto platinum.

Times tables knowledge is a key area of mathematical learning that supports many other areas. We believe that it is important for the children to learn their times tables and to be able to recall them at speed. All children from Y1 - Y6 have access to Times Tables Rock Stars which is an online programme that we use to enable regular rehearsal of times tables for all children. This is a personalised programme for groups or individuals.

Assessment

A baseline assessment is carried out on entry and this is used to inform planning. Ongoing formative assessment is carried out following each daily mathematics lesson. Summative NTS assessments are carried out three times a year. The results of the NTS assessments are uploaded onto our data tracker (Insight).

We are able to identify focus areas for each year group and to identify any over-arching themes for development across the school. Using the data tracker, we are able to conduct a comparison of our schools results with other schools in the country that use NTS assessments.

Monitoring and Impact

VF is given in class and on Tapestry (EYFS) and planning is adapted where necessary. Interventions are planned. We monitor Maths through book looks, (as SL and in SM), INSIGHT tracking and moderation across schools. We complete regular checks to assure that the NC is covered by tracking the blocks of work and small steps through to the book - we use this to monitor progression across the strands. We look at the quality of maths in maths and cross – curricular books through learning walks, drop-ins, pupil conferencing and book looks. This ensures the children are given a variety of contexts in which they can