

Maths



Intent, Implementation & Impact

Intent

We want children to enjoy mathematics and believe all children can experience success in the subject. We are committed to developing children's curiosity as well as an appreciation of the beauty and power of mathematics. To achieve this, we intend to deliver an ambitious, connected curriculum accessible to all pupils in school right through from Reception to Year 6. We aim to provide a wide variety of mathematical experiences in each term and year group. This includes maximising opportunities to support children's enjoyment of maths learning outdoors. We enjoy mathematical activities that are big, noisy and messy, using the natural and built environment in ways that are less easy indoors.

We place great emphasis on the use of concrete resources and pictorial representations at all ages, to enable children to fully understand the concepts and principles when presented with abstract calculations and questions. Mathematical reasoning helps children become aware of their thought processes and regular mathematical talk makes reflective thinking easier. Our belief is that such skills balanced with memorising key facts and methods will support deep and sustainable learning and enable pupils to make connections across all areas of mathematics. Mistakes and misconceptions are viewed positively and discussed as an essential part of learning, helping to develop resilience, confidence and independence.

Implementation

As a school, we follow White Rose small steps to ensure comprehensive coverage of National Curriculum objectives. Other ways that we develop deep knowledge, understanding and skills is through:

- From Reception to Year 6, we adhere to our calculation policy and fractions progression policy which outline the progression of strategies and methods to be taught. These ensure a cohesive whole school approach to teaching methods.
- Mathematical reasoning is embedded into daily teaching practice.
- Active lessons used regularly to support whole body learning, retention and recall.
- Declarative knowledge practised regularly to embed.
- Well-resourced classrooms enable teachers to follow a concrete-pictorial-abstract approach to teaching new concepts.
- Subscriptions to 'Purple Mash' and 'MyMaths' support learning in school, in after-school interventions and at home.
- Computing/programming resources 'Scratch', 'Roamer' and LOGO are used to support learning in KS2.
- Annual North Kidlington Maths Day raises the profile of maths teaching and applications of Maths in the real world.
- Mathematics staff CPD is included regularly on the staff meeting agenda.

	SEND	Disadvantaged
	Numberstacks sessions before/after school with support available. Purple Mash logins available so children with SEND can access additional maths activities at home. Identifying gaps in knowledge and providing targeted support or individualised curriculums ensure all children with SEND can make progress in mathematics. Children moved into Maths groups covering the year group objectives they are covering, within departments. Reading support given to children with SEND during assessments to ensure that they are not disadvantaged and are able to show their mathematical abilities in line with other pupils.	High quality teaching means all our children have access to a wide range of opportunities regardless of socio-economic position in life. Disadvantaged children are given full access to the maths curriculum. Pupil premium children attending breakfast club on free spaces are given time and support to access Purple Mash during this before school session. Chromebooks lent to pupil premium children in KS2 so they can access MyMaths for maths homework. The school offers a range of booster groups for those children who are falling behind/have learning gaps. The groups are run before or after school to ensure the children are not missing other curriculum opportunities.

Impact	Pupils are active and questioning in maths and have secured the key knowledge and skills as directed by the National Curriculum. At NKS, we use a three-tiered approach to monitor the impact: 1. Assessment is used to shape future learning, both for the individual child and for future cohorts. In maths we use the following assessment methods: regular multiplication assessments, termly PUMA standardised assessments, National Standardised Assessments (SATs), regular arithmetic tests, live assessments; quizzes; discussions; practical tasks; rubrics; targeted questioning; 'book-looks'; investigations and formal testing. All assessment is purposeful and should not create an onerous workload for teachers. 2. Regular pupil progress meetings, structured conversations, parents' evenings, SEN reviews and pupil voice ensure there is parity for all groups of pupils. 3. Information is verified through oversight by Subject Cluster Groups, school leadership and the governing board.
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