Mathematics Progression at NLAS

At NLAS we recognise the importance of mathematics for our children now and in their future life. Mathematics enables children to understand relationships and patterns in the world around them. It is essential to everyday life, critical to science, technology and engineering and necessary for financial literacy and most forms of employment. We intend to give each child the self-confidence and resilience to reach their full potential by ensuring that they have the tools to calculate fluently, reason logically, problem solve and think in abstract ways.

Intent

At NLAS, our intention is to provide a high-quality mathematics curriculum which promotes confidence and enjoyment, and inspires curiosity about Maths. our curriculum supports our pupils to become confident, competent and independent mathematicians. This is achieved by developing a positive mindset in all our staff and children that everyone can do maths and that maths is for everyone. We want every child to thrive and succeed in their maths lessons, enabling them to transition to secondary school as confident mathematicians with a secure foundation upon which to build in Key Stage 3 and 4. Our maths curriculum provides our children with knowledge of the necessary number facts to enable them to work fluently throughout all areas of the maths curriculum. They develop a deep conceptual understanding of each area of the areas of mathematics they are taught, enabling them to make connections and apply their knowledge in different situations. Our curriculum has a strong focus on mathematical vocabulary and develops children's ability to articulate, discuss and explain their thinking using accurate language. Our maths curriculum supports our children to develop resilience when faced with problem solving situations and encourages them to be inquisitive learners.

Our Four Curriculum Drivers underpin our approach to learning across all subjects at NLAS.

Global Citizens

Healthy Body, Healthy Mind

Adventure & Exploration

Aspirations

Implementation

Our curriculum is based on the NCETM's Curriculum prioritisation materials and follows a mastery approach. The structure of the mathematics curriculum across school, shows clear progression in line with age related expectations with a strong focus on the . Teaching the curriculum content in blocks, allows children time to explore skills and knowledge in depth and gain a secure understanding of particular subject matter. Key knowledge and skills are also revisited daily to embed and solidify learning using flashback four. The EYFS curriculum is based on the NCETM's mastering Number Programme. This programme is also followed in KS1 and is used as an additional 10 minute daily maths session to develop children's number fact recall and fluency. In Year 3, the children continue with the Mastering Number Programme where needed and then progress to working with the times table booklets. In KS2, the children follow our schools progression for times tables, consisting of sessions developing a conceptual understanding of the times table, before spending time developing recall of the times table facts. Lessons are carefully crafted using small coherent steps. Manipulatives are used throughout all Key stages to expose mathematical structures and alongside a wide variety of representations, support children to move into working confidently in the abstract. There is a strong focus on both conceptual and procedural variation in lessons, enabling children to understand what a mathematical concept 'is' and also what it 'is not'. Stem sentences, and high level, precise mathematical vocabulary are used throughout all year groups to provide our children with the language they need to articulate their responses to questions and explain their thinking. Children are assessed in maths against the early learning goals in EYFS and against the Ready to Progress Criteria from Year 1 to 6. These assessments are used to identify any children who need additional support in any of these key areas to ensure an effective transition to he maths curriculum in the next year group. Keep up interventions are completed daily where needed and catch up interventions are completed using the ready to progress support materials produced by the NCETM.

Impact

The impact of our mathematics curriculum is that children understand the relevance and importance of what they are learning in relation to real world concepts. Children know that maths is a vital life skill that they will rely on in many areas of their daily life. Children have a positive view of maths due to learning in lessons which are a hive of activity, where hands-on exploration and peer-to-peer discussion creates excitement, builds positive attitudes and ensures that children feel safe to make mistakes. Our maths books evidence work of a high standard of which children clearly take pride; the components of the teaching sequences demonstrate good coverage of fluency, reasoning and problem solving. Our feedback and interventions support children to strive to be the best mathematicians they can be, ensuring a high proportion of children are on track or above. By the end of Year 6, transitioning to secondary school, we aspire that an NLAS mathematician will have developed a bank of efficient and accurate skills that can be used to calculate effectively. These will have been underpinned by a deep conceptual understanding so children 'understand the maths' rather than 'just do the maths'. Children will be able to apply these mathematical skills to become confident and resilient problem-solvers with the ability to reason and articulate their ideas mathematically using precise vocabulary.

Whole School Mathematics Overview by Year Group

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS						
Year 1	Previous reception experiences - Cardinality and counting - Comparison - Composition - Pattern - Shape and space - Measures Composition of numbers 20-100	Comparison of quantities and part-whole relationships Numbers 0 to 5 Recognise, compose, decompose and manipulate 2D and 3D shapes	Recognise, compose, decompose and manipulate 2D and 3D shapes Numbers 0 to 10 Additive structures	Additive structures Addition and subtraction facts within 10	Numbers 0 to 20 Unitising and coin recognition	Unitising and coin recognition Position and direction Time
Year 2	Numbers 10 to 100 Calculations within 20	Fluently dd and subtract within 10	Introduction to multiplication	Introduction to division structures Shape	**Money** **Fractions**	Multiplication and division – doubling and halving

		Addition and subtraction of 2 digit numbers (1)		Addition and subtraction of 2 digit numbers (2)	Time Position and Direction	Sense of measure – capacity, volume, mass

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Addition and Subtraction Numbers to 1000	Numbers to 1000	Right Angles Additive Relationships. Securing Mental Calculation	Column Addition 2,4,8 times tables Column Subtraction	Unit Fractions	Non-Unit Fractions Parallel and Perpendicular Sides in Polygons Time
Year 4						

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5						
Year 6	Arithmetic Skills Calculating Knowledge of Stuctures Mutiples of 1000	Arithmetic Skills Numbers up to 10,000,000 Draw Compose and Decompose Shapes Multiplication and Division	Arithmetic Skills Area and Perimeter Fractions and Percentages Statistics	Arithmetic Skills Ratio and Proportion Solving Problems with two unknowns. Order of Operations Mean	Arithmetic Skills Revision of topics in more detail.	Arithmetic Skills Maths project bringing together all Y6 learning.