MATHS AT NEWTOWN LINFORD PRIMARY SCHOOL
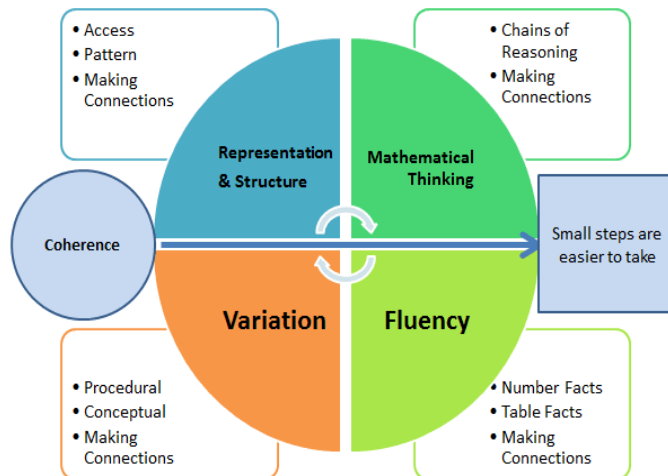
Excellence: ALL children can achieve!

We use a **mastery approach** to teaching maths as outlined by the NCETM.

Fluency, reasoning and problem solving are the three aims of the National Curriculum and are taught within all units of work across the school.

Our vision is for all children to **enjoy** and **believe** that they can achieve as mathematicians.

Children are taught within their year group or phase group, working in mixed ability pairs or groups. Concrete resources are encouraged and available for all children.

In KS1, the curriculum is taught based on the NCETM Curriculum Prioritisation Materials guidance, which focuses on small, coherent steps in learning to ensure children have a deep understanding of mathematics. In KS2, the curriculum is based on the White Rose Maths scheme of work, using their lesson objectives and dipping into their resources. At Newtown Linford, however, we believe that maths cannot be taught directly from a scheme as we focus on the needs of each individual class and pupil, and we have the confidence to carefully select from a wider range of resources, representations and problem-solving tasks. Children retrieve and recall mathematical knowledge at the beginning of each lesson, making links to new concepts. In addition, pupils retrieve and recall prior knowledge in 'Flashback 5!' morning tasks, covering concepts taught in previous units.

OUR LESSONS

All year groups from Year 1-6 follow the same structure of a maths lesson to ensure consistency, high expectations, and the opportunity to retrieve, learn, practise, apply, and go deeper.

Retrieval and Recall

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Input & Whole Class Practise

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Independent Practice

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Going Deeper

EARLY NUMBER

Children in EYFS follow the NCETM Mastering Number programme as their daily maths lesson. Shape, space and measures are planned for and taught in addition to this through discrete lessons, as well as through planned continuous provision opportunities.

Pupils in Key Stage 1 take part Mastering Number sessions in addition to their usual daily maths lessons. The NCETM Mastering Number programme '**will develop solid number sense, including fluency and flexibility with number facts, which will have a lasting impact on future learning for all children**'.
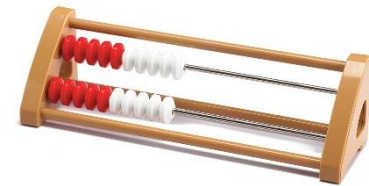
CALCULATION

Our calculation policy can be found on our school website.

TIMES TABLES

Below shows the Multiplication Tables that are introduced in Years 2-4;

Year 2: **2, 5, 10**

Year 3: **3, 4, 8**

Year 4: **6, 9, 7, 11, 12**

Times Tables are introduced through the schemes outlined above. They are practised using TT Rockstars, and Maths Hub Booklets.

ASSESSMENT

In Year 2-6, summative tests are used to measure attainment and progress. PIXL paper tests (including previous SATs papers in Years 2 & 6) are administered for an initial baseline assessment and then again on a termly basis. At the end of Year 2, the optional SATs papers are administered. At the end of Year 4, the statutory Multiplication Tables Check is administered. At the end of Year 6, the statutory SATs papers are administered. Attainment and progress are monitored by the Maths Lead and pupil progress conversations take place regularly.

Maths Curriculum Overview

	Autumn 1 7.5 weeks	Autumn 2 8 weeks	Spring 1 6 weeks	Spring 2 7 weeks	Summer 1 4 weeks	Summer 2 6 weeks
EYFS **Mastering Number**	Pupils will: • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers • connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts **White Rose: Measures & Patterns, Circles & triangles**		Pupils will: • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers • understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • order numbers and play track games • join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers **White Rose: Shapes with 4 sides, Mass & capacity, length height & time**		Pupils will: • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2 • begin to generalise about 'one more than' and 'one less than' numbers within 10 • continue to identify when sets can be subitised and when counting is necessary • develop conceptual subitising skills including when using a rekenrek **White Rose: Explore 3D shapes, visualise map & build**	

Year 1 NCETM Curriculum Prioritisation Materials White Rose*	• Previous reception experiences and counting within 100	• Comparison of quantities and part-whole relationships. • Numbers 0-5 • Recognise, compose, decompose and manipulate 3D shapes	• Numbers 0-10 • Additive structures	• Addition and subtraction facts within 10 • Numbers 0 to 20	• Unitising and coin recognition	• Position and direction • Time • **Fractions*** • **Arrays for multiplication & division***
Year 2 NCETM Curriculum Prioritisation Materials White Rose*	• Numbers 10 to 100 • Calculations within 20	• Fluently add and subtract within 10 • Addition & subtraction of 2-digit numbers • Introduction to multiplication	• Introduction to division structures	• Shape • Addition & subtraction of 2-digit numbers • Money	• **Statistics*** • Fractions • Time • Position and direction SATs	• Sense of measure – capacity, volume, mass • Multiplication and division – doubling, halving, quotitive and partitive division
Years 3 & 4 White Rose	• Place value • Addition & subtraction	• Multiplication and Division • Area (Yr 4 only)	• Length and perimeter • Fractions	• Mass and capacity (Yr 3 only) • Decimals (Yr 4 only) • Money	• Time • Shape	• Statistics • Position & direction (Yr 4 only)
Years 5 & 6 White Rose	• Place value • Addition & subtraction • Multiplication & division	• Fractions • Multiplication & Division B (Year 5) • Converting units (Year 6) • Ratio (Year 6)	• Algebra (Year 6) • Decimals & percentages • Perimeter & Area (inc. Volume Year 6) • Statistics	• Shape • Position & direction • Decimals	• Negative Numbers • Converting units (Year 5) • SATS (Year 6)	• Volume (Year 5) • (Yr 6 consolidation, problem solving, themed projects)