



Lawrence View Primary and Nursery School Curriculum Offer

Intent:

It is our intention that our Maths curriculum is driven through our curriculum aims and school vision which is, 'To create a school environment where children learn and grow together to reach their full potential' ; through the school leaf vales of kindness, curiosity, respect, aspiration and resilience; and the National Curriculum.

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

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

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- 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.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects. The expectation is that pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. 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.

Curriculum Implementation

At Lawrence View children study mathematics daily covering a broad and balanced mathematical curriculum including elements of number, calculation, geometry, measures and statistics. We incorporate spaced practice by way of repeat, revisit and review activities where something from the previous year, previous week and previous day are used as starters, also we utilise graphic organisers where we can such as a Frayer model to practice vocabulary. Alongside daily maths sessions an additional 15 minutes a day is spent focusing on practising fluency, to build confidence and precision in these areas and to think about numbers in a different way. Due to the interconnected nature of mathematics, at Lawrence View we aim to teach maths in a cross curricular

Respect, Curiosity, Kindness, Aspiration, Resilience.



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manner as well as discretely to teach the practical application of mathematical skills. We focus not only on the mathematical methods but also focus on mathematical vocabulary and to use Maths Mastery to broaden and deepen mathematical understanding.

We aim for each child to be confident in each yearly objective and develop their ability to use this knowledge to develop a greater depth understanding to solve varied fluency problems as well as problem solving and reasoning questions. We follow the White Rose order of units alongside a range of textbooks and online resources throughout the school to ensure a curriculum that is specific to each child's learning needs. Children in Year 1 to Year 6 complete their homework activities using the online homework resource My Maths, which aims to build pupil engagement and consolidate maths knowledge.

From the 2019/20 academic year onwards, schools in England will be required to administer an online multiplication tables check (MTC) to year 4 pupils. The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided. To support the children with their multiplication practice we celebrate achievements in times tables in Friday assembly, we practice using Maths Shed online resource and a table tests every week.

EYFS

In Early Years, Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measure. This is enriched through continuous provision inside and outside the classroom such as baking, music and lining up.

Pupils are taught to

Number

count reliably with numbers from 1 to 20

place them in order and say which number is one more or one less than a given number

add and subtract two single-digit numbers and count on or back to find the answer using quantities and objects

solve problems, including doubling, halving and sharing

Shape, space and measure

use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems

recognise, create and describe patterns

explore characteristics of everyday objects and shapes

use mathematical language to describe them.

Key Stage 1

The National Curriculum (2014) states that:

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The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools].

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency.

Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Lower Key Stage 2

The National Curriculum (2014) states that:

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12-multiplication table and show precision and fluency in their work.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Upper Key Stage 2

The National Curriculum (2014) states that:

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.



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By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Pupils should read, spell and pronounce mathematical vocabulary correctly.

Please see the PDFs below for the mathematic objectives for each individual year group.

Curriculum Impact

Pre assessment on each maths topic area is undertaken before starting a maths topic. This helps to inform planning of children's individual needs and identifies where pre teaching and post teaching will give the children the best possible success. Post assessment takes place a few weeks after a topic to assess the children's learning and allows teachers to identify any gaps the children may still have.

Throughout each lesson formative assessment takes place and feedback is given to the children through marking and oral feedback, next step tasks help to ensure they are meeting the specific learning objective. Teacher's then use this assessment to influence their planning and ensure they are providing a mathematics curriculum that will allow each child to progress. The teaching of maths is also monitored on a termly basis through book scrutinies, learning walks and lesson observations. Each term children from Year 2 and above complete a summative assessment to help them to develop their testing approach and demonstrate their understanding of the topics covered. Key Stage 1 use a combination of Rising Stars test and previous SATs papers (Year 2) whilst Key Stage 2 use tests and previous SATs papers (Year 6.) The results from both the formative assessment and summative assessment is then used to determine children's progress and attainment.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. 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.