

Maths Overview

Mathematics at Oughton

Intent

At Oughton, we understand that a high-quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the wonder of mathematics and a sense of enjoyment and curiosity about the subject.

We aim to ensure children:

- Become fluent in the fundamentals of mathematics, through varied and frequent practice, with increasingly complex problems over time.
- Develop an ability to recall knowledge and apply arithmetic rapidly and accurately.
- Reason mathematically by following a line of enquiry, identifying relationships and using mathematical language to explain.
- Understand, retain and apply mathematical language.
- Solve problems by applying their mathematics to a variety of routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.

Implementation

Maths is taught following the National Curriculum 2014. We have adopted planning to focus on short tasks and main tasks, with application tasks within the lesson. Maths lessons are interactive to ensure that all children enjoy and participate in their lessons. Different strategies are taught throughout the school – see Calculation Policy. We follow Herts for Learning Mathematics Essentials planning and we use a variety of resources to help support the learning in Maths. We are using the Herts for Learning Assessment format, to show progress and attainment in Maths.

Maths Overview

EYFS Overview						
Vertical progression – Mathematics – Number & Numerical Patterns - Maths overview						
Playing & Exploring - Engagement		Active Learning - Motivation			Creating & Thinking Critically - Thinking	
<ul style="list-style-type: none"> • Finding out & exploring • Playing with what they know • Being willing to 'have a go' 		<ul style="list-style-type: none"> • Being involved & concentrating • Keep on trying • Enjoying achieving what they set out to do 			<ul style="list-style-type: none"> • Having their own ideas (creative thinking) • Making links (building theories) • Working with ideas (critical thinking) 	
<p>ELG</p> <p>Number</p> <ul style="list-style-type: none"> - Have a deep understanding of number to 10, including the composition of each number - Subitise (recognise quantities without counting) up to 5 - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts <p>Numerical Patterns</p> <ul style="list-style-type: none"> - Verbally count beyond 20, recognising the pattern of the counting system - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally 						
Year Group	Place Value: Counting	Place Value: Represent	Place Value: Use & compare	Addition & Subtraction: Recall, represent, use	Addition & Subtraction: Calculations	Addition & Subtraction: Solve problems
Nursery	<ul style="list-style-type: none"> • Counting verbally as far as they can go • Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5 • Uses some number names and number language within play, and may show fascination with large numbers 	<ul style="list-style-type: none"> • Begin to recognise numerals 0 to 5. • Subitises one, two and three objects (without counting) • Links numerals with amounts up to 5 and maybe beyond 	<ul style="list-style-type: none"> • Compares two small groups of up to five objects, saying when there are the same number of objects in each group, 	<ul style="list-style-type: none"> • Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle) • Explores using a range of their own marks and signs to which they ascribe mathematical meanings 	<ul style="list-style-type: none"> • Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers • Beginning to recognise that each counting number is one more than the one before 	<ul style="list-style-type: none"> • Beginning to use understanding of number to solve practical problems in play and meaningful activities • Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same
Reception	<ul style="list-style-type: none"> • Reciting numbers from 0 to 5 and then to 10 (and beyond) and back from 10 to 0 • Counts out up to 10 objects from a larger group 	<ul style="list-style-type: none"> • Engages in subitising numbers to four and maybe five • Increasingly confident at putting numerals in order 0 to 10 (ordinality) • Matches the numeral with a group of items to show how many there are (up to 10) 	<ul style="list-style-type: none"> • Uses number names and symbols when comparing numbers, showing interest in large numbers • Estimates of numbers of things, showing understanding of relative size 	<ul style="list-style-type: none"> • Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and + or - • Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects 	<ul style="list-style-type: none"> • In practical activities, adds one and subtracts one with numbers to 10 	<ul style="list-style-type: none"> • Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three

Maths Overview

Year group	Autumn	Spring	Summer
Nursery Maths	<p>Count in play</p> <p>Recite numbers to 5 and beyond</p> <p>React to changes in amounts e.g. hiding and returning rhymes- two dicky birds</p> <p>Begin to subitise up to two</p> <p>Compare sizes using some gesture and language e.g. bigger, longer, taller, smaller, etc.</p> <p>Make comparisons between objects- size, length, weight and capacity</p>	<p>Say one number name for each item</p> <p>Show 'finger' numbers to 5</p> <p>See 3 in different ways (through different manipulatives e.g. 3 sticks as a row/ triangle/ on top of each other) and recognise it without counting</p> <p>Make comparisons between quantities</p>	<p>Count, order, recognise and use numbers to 5</p> <p>Subitise up to 3 objects (recognise up to 3 objects quickly without counting)</p> <p>Compare quantities using the vocabulary of greater, less, more, fewer and the same</p>
Reception Maths	<p>Count to 5 using different mathematical resources</p> <p>Match numeral and quantity to 5</p> <p>Say how many there are (up to 3) in different arrangements</p> <p>Start to show how numbers can be made up e.g. 1 and 3 is 4 and know there is more than one way of doing this</p>	<p>Count objects, claps, movements up to 10</p> <p>Match numeral and quantity (within 10)</p> <p>Say how many there are (up to 5)</p> <p>Recall number bonds to 5</p> <p>Start to give some linked subtraction facts</p> <p>Start to recall some double facts e.g. 1 and 1 is 2</p>	<p>Have a deep understanding of number to 10, including the composition of each number</p> <p>Subitise (recognise quantities without counting) up to 5</p> <p>Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts</p>

Maths Overview

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p>Geometry/ordinal numbers</p> <p>Numbers to ten: patterns, counting, estimating, ordering, regrouping, part and whole, solving problems</p>	<p>Numbers to ten: comparison, equality</p> <p>Numbers to twenty: ordering, more/less, doubling and halving, odd and even</p> <p>Geometry – shape names and properties</p>	<p>Measures</p> <p>Sequencing events</p> <p>Numbers to twenty: adding, subtracting, equality, part and whole, language and problem solving</p>	<p>Numbers to twenty: comparison</p> <p>Measures – money</p> <p>Counting in 2s, 5s, 10s</p> <p>Measures including standard units</p>	<p>Multiplication and division</p> <p>Time</p> <p>Fractions</p>	<p>Fractions</p> <p>Numbers to twenty review</p> <p>Numbers to one hundred</p> <p>Place value</p>
Year 2	<p>Securing fluency to twenty</p> <p>Place value</p> <p>Counting on and back</p> <p>Representing, ordering and comparing numbers to 100</p> <p>Mental addition and subtraction</p>	<p>Finding complements of 10 and 100</p> <p>Mental addition and subtraction</p> <p>Part and whole</p> <p>Money Comparison</p> <p>Measures</p>	<p>Statistics</p> <p>Written addition and subtraction</p> <p>Problem solving with addition and subtraction</p> <p>Time</p>	<p>Doubling and halving</p> <p>Times tables</p> <p>Multiplication and division</p>	<p>Fractions</p> <p>Time</p> <p>Problem solving for all four operations</p>	<p>Multiplication and division</p> <p>Geometry – properties of shapes, symmetry, sequencing, rotation and right angles</p> <p>Place value and calculation review</p>

Maths Overview

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Securing fluency to twenty Place value Counting on and back Representing, ordering and comparing numbers to 100 Mental addition and subtraction	Finding complements of 10 and 100 Mental addition and subtraction Part and whole Money Comparison Measures	Statistics Written addition and subtraction Problem solving with addition and subtraction Time	Doubling and halving Times tables Multiplication and division	Fractions Time Problem solving for all four operations	Multiplication and division Geometry – properties of shapes, symmetry, sequencing, rotation and right angles Place value and calculation review
Year 4	Place value Addition and subtraction (mental and written) Multiplication and division (mental) Times tables	Measures Discrete and continuous data Perimeter Times tables	Properties of shape Symmetry Decimals (including calculations) Measures – money Fractions Times tables	Fractions Multiplication and division (written) Times tables	Time Statistics Roman Numerals Negative numbers Geometry – angles, triangles and co ordinates	Multiplication and division review Area Fractions review Application and problem solving

Maths Overview

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	Place value Properties of number Prime and composite numbers Multiplication and division (mental)	Addition and subtraction (mental and written) Multiplication and division (written) Fractions	Problem solving with all four operations Fractions Measures Area Volume and capacity	Percentages 3D and 2D shape Reflection and translation Perimeter Angles	Multiplication and division Fractions problem solving Measures Timetables and time	Problem solving with all four operations Properties of shape Statistics Roman Numerals
Year 6	Place value Mental calculation strategies Problem solving with all calculations Factors, multiples, primes Fractions	Fractions, decimals and percentages Multiplication Area Division Properties of shape	Algebra Division Perimeter and area Shape – angles, reflection and translation Fractions	Ratio and proportion Volume Measures Statistics – line graphs Algebra and sequences SATs - revisit all areas of Maths	Statistics Application of known facts and calculations Constructing pie charts SATs - revisit all areas of Maths	Statistical representations Further algebra Financial Maths and enterprise Maths preparation for KS3

Promoting British Values at Oughton Primary and Nursery School:

There are opportunities for the promotion of British Values throughout the Maths Curriculum, especially when solving problems. The British values are Democracy, The Rule of Law, Individual Liberty, Mutual Respect and Tolerance of those of different faiths and beliefs.

Maths Overview

The Rule of Law is demonstrated through the Maths curriculum and the school's promotion, sharing and adherence to our Promoting Positive Behaviour Policy. Behaviour for Learning is promoted throughout the school.

At Oughton, the Herts for Learning Units shows progression and the building of skills following the National Curriculum. The planning focuses on core knowledge, key vocabulary and prior learning.

We comply with the Equality Act 2010 and the Special Educational Needs and Disability Regulation 2014 by ensuring that the Maths Curriculum is accessible for **all** learners through adaptations to meet the needs of our children.

Parents / Carers - if you wish to find out more about our Maths Curriculum, please email admin@oughton.herts.sch.uk and ask the Maths Subject Leader to contact you.