



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Our Mathematics curriculum is ambitiously constructed to engage, inspire, challenge and develop an understanding of interrelated mathematical concepts.

At Thongsley Fields we recognise that mathematics is an essential skill for everyday life. A high-quality maths education will help our children gain the knowledge, understanding and skills necessary to prepare them for the next stage of their education and life. We aim to ensure that our children develop a positive and enthusiastic attitude towards maths, asking questions, making decisions and discovering connections between different elements of their learning.



BIG IDEAS

Our children will:

- Understand place value and numbers.
- Quickly and accurately recall times tables up to 12.
- Make connections with numbers and apply them in various contexts.
- Use diverse methods to answer questions.
- Utilize concrete, pictorial, and abstract representations for deeper understanding.
- Reason, identify mistakes, and articulate explanations.
- Solve problems using various approaches.

We acknowledge that mathematics plays a crucial role in navigating everyday life and responsibilities. A solid grasp of mathematical concepts will enhance our children's chances for future academic success.



CONTENT & SEQUENCING

Our math curriculum is sequenced to build on previous learning and reinforce essential skills. Lessons follow a consistent "I do, we do, you do" structure, enriched with mathematical vocabulary and explicit instruction. Regular review sessions, guided by internal assessments, reinforce prior knowledge.

EYFS: Children will learn to subitise numbers up to 6, count with one-to-one correspondence, and compare numbers up to 10. They will recall of number bonds to 10 and doubles to 12, exploring shape, space, and measurement through high-quality activities indoors and outdoors.

Key Stage 1: Children will develop a solid understanding of place value with numbers up to 100 and beyond. They will confidently use various methods to solve problems involving the four operations and describe different quantities, including length, mass, capacity, time, and money. They will master counting in multiples of 2, 3, 5, and 10, reinforcing multiplication facts.

Lower Key Stage 2: Children will further develop their understanding of place value with numbers over 1,000 and learn formal methods for the four operations. By the end of Year 4, they will fluently recall times tables up to 12.

Upper Key Stage 2: Children will connect fractions, decimals, percentages, and ratios, enabling them to solve increasingly complex problems. They will analyse shapes and their properties, confidently articulating relationships, and utilize various instruments for precise measurement. Additionally, they will employ algebraic language to effectively solve a variety of problems.



DIRECT INSTRUCTION

- Our lesson structure provides opportunities for direct instruction through the "I do, we do, you do" approach.
- Each lesson includes a vocabulary slide, with staff modelling the use of this vocabulary throughout the lesson.



RETRIEVAL PRACTISE

- Pupils use "show me boards" during the "on the boil" section of lessons for active engagement and daily retrieval practise.
- Vocabulary slides are included in every lesson. These words are then displayed on working walls for reference.
- Pupils take part in regular mini-quizzes (tests) and retrieval tasks in order to strengthen their memory.



PROGRESS

- PIXL assessments are conducted each term to evaluate pupils' progress, along with teacher judgments.
- Assessment data, particularly QLAs, inform lesson planning and are used during the "on the boil" section to identify and address gaps in learning.
- Interventions, such as PIXL therapies, support children with gaps in their learning.



SUPPORT

- The familiar lesson structure helps pupils feel safe and secure.
- Classrooms are equipped with appropriate resources, and pupils know how to access them.
- Our mastery approach promotes inclusivity, and teachers are skilled at identifying and addressing individual needs, including through PIXL therapies.

Excellence for all - a curriculum to be proud of.



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Mathematics

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B

<p>Number & Place value</p> <p>Key Themes: Recognise & count Compare Represent Interpret Positive & negative Decimals Rounding Composition</p>	<p>Counting Daily counting and use of 'number problems' e.g. getting correct number of milk for the group.</p> <p>Subitising Subitising to 5.</p> <p>1:1 correspondence Number rhymes based around 1:1 correspondence (stable order principle).</p> <p>Represent Represent numbers using their fingers, objects and marks.</p>	<p>Counting Count to 20 and beyond.</p> <p>Subitising Subitize to 10.</p> <p>1:1 correspondence Counting and stable order principle.</p> <p>Recognise Recognise, read and write numbers to 10 by matching quantities.</p> <p>Represent Match numerals to quantities and represent quantities in different ways.</p> <p>Compare Compare objects and numerals using comparison language (equal, unequal, odd and even).</p> <p>Sequencing Sequence numbers to 5 – including missing numbers.</p>	<p>Counting Count forwards and backwards to 100 starting at any given numbers.</p> <p>Count in multiples of 2s, 3s, 5s and 10s.</p> <p>Recognise Recognise, read and write numbers between 0 and 100.</p> <p>Composition Identify the place value of each digit in two-digit numbers.</p> <p>To identify 0 as a place holder.</p> <p>Represent Represent numbers on a number line, including estimation.</p> <p>Compare Use inequality symbols and language for comparing whole numbers up to 100. Identify one more or one less of a given number.</p> <p>Solve number problems and practical problems involving these ideas.</p>	<p>Counting Count backwards through zero to include negative numbers.</p> <p>Recognise Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).</p> <p>Read and write numbers up to 1000 in numerals and in words.</p> <p>Compare Find 10, 100 and 1,000 more or less than a given number.</p> <p>Compare and order numbers more than 1,000.</p> <p>Represent Identify, represent and estimate numbers using different representations.</p> <p>Rounding Round any number to the nearest 10, 100 or 1000.</p> <p>Links to other subjects Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value (threaded into our history and art curriculum).</p> <p>Solve number problems and practical problems involving these ideas.</p>	<p>Counting Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</p> <p>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</p> <p>Recognise Read, write, order and compare numbers to at least 10 000 000 and determine the value of each digit.</p> <p>Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.</p> <p>Rounding Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>Compare Read, write, order and compare numbers with up to three decimal places.</p> <p>On the boil Read Roman numerals to 1000 (M) and recognise years written in Roman numerals (recapped in 'on the boil').</p> <p>Solve problems involving number up to three decimal places.</p>			

Excellence for all - a curriculum to be proud of.



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B
Addition & Subtraction Key Themes: Composition Addition and subtract Inverse Solving problems Formal methods	<p>Count Count objects with 1:1 correspondence (order irrelevance principle) up to 5, confidently.</p> <p>Composition Composition of numbers to 5.</p>	<p>Count Count to find how many from a group.</p> <p>Composition Composition to 10 including subtraction facts.</p> <p>Addition and subtraction Recall doubles and number bonds up to 10.</p> <p>Begin to write simple number sentences using these facts eg; $6 + 4 = 10$.</p> <p>Find equal amounts – introduce = sign.</p>	<p>Addition and subtraction Read, write and interpret mathematical statements which include addition, subtraction and equals symbols.</p> <p>Represent and use number bonds and related subtraction facts within 20.</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers <p>Identify the effect of adding or subtracting 0.</p> <p>Recognise that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</p> <p>Inverse Use the inverse relationship between addition and subtraction and use this to check calculations.</p> <p>Solving problems Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = - 9$.</p> <p>To use real life examples to support reasoning and problem solving related to addition and subtraction to 20 including missing numbers.</p>	<p>Addition and subtraction Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens and a three-digit number and hundreds.</p> <p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Inverse Estimate and use inverse operations to check answers to a calculation.</p> <p>Solving problems Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Addition and subtraction To add and subtract whole numbers with more than 4 digits, (columnar addition and subtraction).</p> <p>To add and subtract numbers mentally with increasingly large numbers.</p> <p>Rounding To use rounding to check answers to calculations and determine, in the context of a problem.</p> <p>Solving problems To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>			



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B

<p>Multiplication & Division</p> <p>Key Themes: Multiplication Division Remainders Commutativity and inverse Formal methods Factors and product Square numbers Solving problems Count</p>	<p>Songs, rhymes and games will begin to introduce the idea of groups of and sharing.</p> <p>Using real objects, children will count how many objects they have in each group and how many they have altogether.</p> <p>Begin to introduce doubles using concrete resources (eg two groups of 3).</p>	<p>Understand how quantities can be distributed equally (grouping) and begin to share objects equally.</p> <p>Recognise odd and even numbers.</p> <p>Recall doubles up to 10.</p>	<p>Count Count in multiples of 2's, 3's, 5's and 10s. (Use coins 2p, 5p, 10p)</p> <p>To make connections between arrays, number patterns, and counting in twos, fives and tens.</p> <p>Multiplication and division To divide by grouping equally using concrete objects, pictorial representations and arrays.</p> <p>Show that multiplication of two numbers is commutative and division is not.</p> <p>Begin to relate multiplication and division knowledge to fractions and measures (for example, $40 \div 2 = 20$, 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (for example, $4 \times 5 = 20$ and $20 \div 5 = 4$).</p> <p>Solving problems Solve one-step problems involving multiplication and division. using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	<p>Going for Gold (x5 sessions a week) Recall multiplication and division facts for multiplication tables up to 12×12</p> <p>Multiplication and division Multiply (using multiplication tables that they know) two-digit by one-digit numbers and three digit by one-digit using mental and written methods.</p> <p>Use place value, known and derived facts to multiply and divide mentally, including:</p> <ul style="list-style-type: none"> • multiplying by 0 and 1 • dividing by 1 • multiplying together three numbers <p>Solving problems Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit (e.g. 20×3, 3×3 to work out 23×3).</p> <p>Factors and multiples Find factor pairs of a number, and common factors of two numbers. Recognise and use square numbers</p>	<p>Factors and multiples Identify multiples and factors, for numbers up to 100.</p> <p>Identify prime numbers for numbers up to 19. Recognise and use cube numbers, and the notation for squared and cubed.</p> <p>Multiplication and division Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.</p> <p>Multiply and divide numbers mentally drawing upon known facts, including with mixed operations and large numbers.</p> <p>Divide numbers up to 4 digits by a one-digit (2 digits for Yr6) number using the formal written method of short division and interpret remainders appropriately for the context – rounding or fractions.</p> <p>Multiply and divide whole numbers and decimals by 10, 100 and 1000 up to 3 decimal places.</p> <p>Use estimation to check answers to calculations.</p> <p>Solving problems Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.</p> <p>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</p>
--	---	---	---	---	---



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B
Fractions Key Themes: Equal parts Equivalence Whole and part Numerator and denominator Decimal point Comparison and ordering Simplify Percentages Recognise Count Addition and subtraction Identify	<p>Introduce the principles of fractions through everyday activities, like cutting food into halves or quarters, baking and measuring ingredients and folding items of clothing.</p> <p><i>Children can absorb mathematical concepts naturally through the joyful repetition of activities in our indoor and outdoor provision.</i></p>	<p>Our indoor and outdoor provision is used to set up everyday experiences like sharing and halving (e.g. in the role play area, at the playdough table).</p> <p>Find equal amounts and introduce the word half using concrete resources.</p> <p>Recognise Recognise half and know this means divided into two equal parts.</p>	<p>Recognise Recognise, find, name and write fractions $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{1}{2}$'s.</p> <p>Recognize, find, and write fractions of a group of objects, including both unit fractions (like $\frac{1}{3}$) and non-unit fractions (like $\frac{2}{3}$) (Y2)</p> <p>Recognise, find and name a half as one of two equal parts of an object, set of objects, shape, length or quantity.</p> <p>Recognise, find and name a quarter as one of four equal parts of an object, set of objects, shape or quantity.</p> <p>Count Count in fractions up to 10 starting from any number, e.g. 1, $1\frac{1}{2}$, 2.</p> <p>Identify Identify halves and quarters are parts of a whole. Including half an hour. (yr $2\frac{1}{4}$ of hours)</p> <p>Identify two halves are equal to/equivalent to one quarter. Write the equivalence $\frac{2}{4} = \frac{1}{2}$</p> <p>Describe Describe position, direction and movement, including whole, half, quarter and three-quarter turns.</p>	<p>Count Count up and down in tenths and hundredths:</p> <ul style="list-style-type: none"> Understand that tenths are created by dividing something into 10 equal parts or by dividing a one-digit number by 10. Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten (Y4). <p>Recognise Recognise and show (using diagrams) families of common equivalent fractions.</p> <p>Read and write decimal numbers as fractions and recognise equivalents e.g. $0.1 = \frac{1}{10}$.</p> <p>Recognise mixed numbers and improper fractions and convert from one form to the other.</p> <p>Addition and subtraction Add and subtract fractions with the same denominator within one whole ($\frac{1}{7} + \frac{5}{7} = \frac{6}{7}$).</p> <p>Compare Compare and order unit fractions, and fractions with the same denominators.</p> <p>Solving problems Work with fractions to calculate amounts, divide quantities (including non-unit fractions), and find answers that are whole numbers.</p> <p>Decimals (Y4) Find the effect of dividing a one- or two-digit number by 10 and 100.</p> <p>Identifying the value of the digits in the answer as ones, tenths and hundredths.</p> <p>Round decimals with one decimal place to the nearest whole number.</p> <p>Compare numbers with the same number of decimal places up to two decimal places.</p>	<p>Compare Compare and order fractions</p> <ul style="list-style-type: none"> whose denominators are all multiples of the same number e.g. $\frac{1}{4}$, $\frac{3}{8}$, and $\frac{5}{16}$. including mixed numbers and improper fractions > 1. <p>Identify Identify, name and write equivalent fractions of a given fraction including tenths and hundredths.</p> <p>Multiply and divide Multiply fractions and mixed numbers by whole numbers, writing it in its simplest form. Divide proper fractions by whole numbers. Calculate decimal fraction equivalents eg $\frac{3}{4} = 0.75$.</p> <p>Simplify Simplify fractions; use common multiples to express fractions in the same denomination (eg $\frac{2}{4}$ and $\frac{1}{6} = \frac{3}{12}$ and $\frac{2}{12}$).</p> <p>Addition and subtraction Add and subtract fractions with different denominators and mixed numbers by using equivalent fractions.</p> <p>Solving problems Solve problems which require answers to be rounded to specified degrees of accuracy.</p> <p>Decimals Recall and use equivalences between simple fractions, decimals and percentages – eg 50%, 0.50 and $\frac{1}{2}$.</p> <p>Percentages and decimals Recognize the % symbol: Understand that it means "parts per hundred" and express percentages as fractions out of 100 and as decimals.</p> <p>Solve problems using percentage and decimal equivalents of common fractions like $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$, and fractions with denominators that are multiples of 10 or 25.</p>			



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B

Measurement		Measurement		Measurement		Measurement	
Measurement Use language of size; big, small, tall, short. <i>Taught through high quality activities in and outside of the classroom.</i>	Measurement To describe the length, size weight or capacity of an object. Make direct comparison with objects relating to their weight, size, length and capacity. Begin to use some units of measurement, eg cm, g etc in real life context. <i>Taught through high quality activities in and outside of the classroom.</i>	Time To use chronological order vocabulary including times of day, dates, months. To tell them time on an analogue clock to the hour and half past. Identify 5 past and 5 too, know minutes (Y2). Money Recognise and know the value of different denominations of coins and notes. Combine amounts to make a particular value. Find different combinations of coins to create the same value of money. Measurement Length - Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] Mass - heavy/light, heavier than, lighter than. Capacity and volume - full/empty, more than, less than, half, half full, quarter. Temperature - degrees Celsius. To measure using standard and non-standard units. Know the number of seconds in a minute and the number of days in each month, year and leap year. <i>Taught using practical resources and linking this to real life contexts. Eg, setting up a shop, weighing objects with scales, comparing volume and capacity in the water tray.</i>	Measurement Convert between different units of measure [for example, kilometre to metre, hour to minute] Measure, compare, add and subtract lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares. Money Add and subtract amounts of money to give change, using both £ and p in practical contexts. Estimate, compare and calculate different measures, including money in pounds and pence. Time Read, write and convert time between analogue and digital 12- and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.	Measurement Convert between different units of metric measure e.g. 1000m = 1 km To understand that metric units relate to common imperial units like inches, pounds, and pints. To convert miles to kilometres. Measure and calculate the perimeter and area of combined rectangular shapes in centimetres and meters. Estimate the area of irregular shapes. Calculate the area of parallelograms and triangles. Estimate volume for example, using blocks to build cuboids and capacity. Time Solve problems involving converting between units of time. Use all four operations to solve problems involving measure [for example, length, mass, volume, money using decimal notation, including scaling.			
					Key Themes: Comparison (language focused) Measurement Time Money Shape Units of measurement e.g. cm		



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B

Geometry					
<p>Geometry</p> <p>Key Themes: Shape (2D and 3D) Symmetry Compare Classify Angles Position and direction Identify Recognise Patterns</p>	<p>Identify Identify some 2D and 3D shapes; circle, square, triangle, rectangle, cube, sphere.</p> <p>Identify shapes in the environment (comparison language).</p> <p>Position and direction Use some positional language (in, on and under).</p> <p>Patterns Comment on patterns and continue a repeating pattern.</p> <p><i>Taught through high quality activities in and outside of the classroom.</i></p>	<p>Identify Identify 2D and 3D that you may see the environment, using mathematical language to talk about them.</p> <p>Rotate and manipulate shapes.</p> <p>Pattern Continue a simple repeating pattern. Some will continue more complex patterns.</p> <p>Position and direction Use positional language to describe a route.</p> <p><i>Taught through high quality activities in and outside of the classroom.</i></p>	<p>On the boil Recognise and name common 2-D and 3-D shapes, including: rectangles, squares, circles and triangles, cuboids, cubes pyramids and spheres (recap on the boil).</p> <p>Identify Identify number of sides; symmetry; edges; faces; vertices.</p> <p>Identify shapes related to everyday objects fluently and sort.</p> <p>Compare Compare and sort shapes.</p> <p>Describe position, direction and movement, including whole, half, quarter and three-quarter turns. Clockwise and anticlockwise.</p> <p><i>Shape spellings to be added to spelling sessions during this topic. Eg; square, circle, triangle, cube, sphere etc.</i></p>	<p>Compare Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</p> <p>Identify Identify acute and obtuse angles and compare and order angles up to two right angles by size.</p> <p>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</p> <p>Symmetry Identify lines of symmetry in 2-D shapes presented in different orientations.</p> <p>(links to DT) Draw 2-D shapes and make 3-D shapes using modelling materials. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.</p> <p>Angles Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.</p> <p>Position and direction Describe positions on a 2-D grid as coordinates in the first quadrant.</p> <p>Describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Plot specified points and draw sides to complete a given polygon.</p>	<p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p> <p>Compare Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.</p> <p>Draw 2-D shapes using given dimensions and angles.</p> <p>Angles Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.</p> <p>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p> <p>Draw and measure angles in degrees. Identify angles around a point, angles on a straight line, and multiples of 90 degrees.</p> <p>Position and direction Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p> <p>Identify, describe and represent the position of a shape following a reflection or translation.</p> <p>Recognise and use reflection and translation in a variety of diagrams, including continuing to use a 2-D grid and coordinates in the first quadrant.</p> <p>Describe positions on the full coordinate grid (all four quadrants).</p> <p>Draw and translate simple shapes on the coordinate plane and reflect them in the axes.</p>



MATHS AT THONGSLEY FIELDS

Growing hearts and minds through mathematics.

Year Group	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	FS1	FS2	Year 1/2 A	Year 1/2 B	Year 3/4 A	Year 3/4 B	Year 5/6 A	Year 5/6 B
Statistics Key Themes: Record Interpret Graphs and tables Data Difference Compare Present Read Calculate	Indoor and outdoor provision builds in opportunities for children to experience organising objects and begin to classify these.	Physically build charts to begin to introduce the idea of graphs / tables (eg a pictogram about fruit can be built using real oranges, apples, bananas and pears placed on a large grid).	Interpret Record, interpret, collate, organise and compare information (for example, using many-to-one correspondence in pictograms with simple ratios 2, 5, 10). Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Solving problems Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.	Interpret Interpret and present data using bar charts, tally charts, pictograms and tables. Compare Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. Solving problems Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	Solving problems To solve comparison, sum and difference problems using information presented in a line graph. Interpret To complete, read and interpret information in tables, including timetables. Interpret and construct pie charts and line graphs and use these to solve problems. Calculate Calculate and interpret the mean as an average.			
Algebra Key themes: Formular Sequences Equations Variables Combinations	Objects are used to represent numerals - e.g. 2 apples represent the number 2.	Repeating patterns and number sequences. Odd and even numbers.	Missing number equations (eg $___ + 4 = 10$ or $7 = ___ - 9$) Exposure to inverse and commutativity (eg $7 \times 8 = 8 \times 7$ or $14 + 3 = 3 + 14$) Use of bar models during lessons to support early generalisations. (eg $7 + 10$ so $E + E = E$)	Exposure to the distributive law (eg $63 \times 4 - 60 \times 4$ and 3×4) Use of bar models during lessons to support early generalisations. (eg $7 + 10$ so $E + E = E$) Solve simple problems in contexts, deciding which of the four operations to use and why (eg four times as high, eight times as long etc.) Correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?	Formulate Use simple formulae. Equations Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.			
Ratio & Proportion Key themes Solving problems Comparison Fractions Multiples Percentages							Solving problems Involving the relative sizes of two quantities where missing values can be found by using multiplication and division facts. Involving the calculation of percentages and the use of percentages for comparison. Involving similar shapes where the scale factor is known or can be found. Involving unequal sharing and grouping using knowledge of fractions and multiples.	

Excellence for all - a curriculum to be proud of.

