# Westleigh Methodist Primary School - Mathematics Curriculum Overview With God, all things are possible - Matthew 19:26 <br> Love Teamwork Thankfulness Generosity Peace Forgiveness Equality Justice 

|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
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| EYFS | Getting to know you WK1-3 <br> - Opportunities for settling in, introducing the areas of provision and getting to know the children. <br> - Key times of day, class routines. Exploring the continuous provision inside and out. Where do th8ings belong? Positional language. <br> Just like me WK4-6 <br> - Match and sort. <br> - Compare amounts. <br> - Compare size, mass and capacity. <br> - Exploring pattern. | It's me 1, 2, 3 WK7-9 <br> - Representing 1,2,3 <br> - Comparing 1,2,3 <br> - Composition 1,2,3 <br> - Circles and triangles <br> - Positional language <br> Light \& dark WK10-12 <br> - Representing numbers to 5 <br> - One more and one less <br> - Shapes with 4 sides <br> - Time | Alive in 5 WK 1-3 <br> Introducing zero <br> Comparing numbers to 5 <br> Composition of 4 \& 5 <br> Comparing mass (2) <br> Comparing capacity (2) <br> Growing 6,7,8 WK4-6 <br> 6,7 \& 8 <br> - Combining 2 amounts <br> - Making pairs <br> - Length and height <br> - Time | Building 9 \& 10 WK7-9 <br> - Counting to 9 \& 10 <br> - Comparing numbers to 10 <br> - Bonds to 10 <br> - 3D shapes <br> - Spatial awareness <br> - Patterns | To 20 and beyond WK 1-3 <br> - Building numbers beyond 10 <br> - Counting numbers beyond 10 <br> - $\quad$ Spatial reasoning (1) <br> - Match, rotate, manipulate <br> First, then, now WK4-6 <br> - Adding more <br> - Taking away <br> - Spatial reasoning (2) <br> - Compose and decompose | Find my pattern WK7-9 <br> - Doubling, sharing \& grouping <br> - Even and odd <br> - Spatial reasoning (3) <br> - Visualise and build <br> On the move! WK10-12 <br> - Deepening understanding <br> - Patterns and relationships <br> - Spatial reasoning (4) <br> - Mapping |
| Year 1 | Place Value WK1-5 <br> - given a number, identify one more and one less <br> Addition, <br> Subtraction, WK6-10 <br> - read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs <br> - represent and use number bonds and related subtraction facts within 20 | Addition <br> Subtraction WK6-10 <br> - add and subtract one-digit and two-digit numbers to 20, including zero <br> - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ $\square$ $-9$. <br> Geometry; Shape WK11 <br> Recognise and name common 2D and 3-D shapes, including: | Place Value WK1-3 <br> - Within 20 <br> Addition \& Subtraction WK3-6 <br> - Within $20-\mathrm{x} 2, \mathrm{x} 5, \mathrm{x} 10$ | Place Value WK7-8 <br> - Within 50 <br> Measurement <br> Length / Height WK9-10 <br> Compare, describe and solve <br> practical problems for: <br> - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] <br> Measurement Weight Volume WK11-12 <br> - mass/weight [for example, heavy/light, heavier than, lighter than] | Multiplication <br> Division WK1-3 <br> solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. <br> Fractions WK4-5 <br> - recognise, find and name a half as one of two equal parts of an object, shape or quantity <br> - recognise, find and name a quarter as one of four | Place Value WK7-8 <br> - Within 100 <br> Money WK9 <br> - recognise and know the value of different denominations of coins and notes. <br> Time WK10-11 <br> - sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] |



|  | check calculations and solve missing number problems. <br> - add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <br> - a two-digit number and ones <br> - a two-digit number and tens <br> - two two-digit numbers <br> - adding three onedigit numbers <br> - solve problems with addition and subtraction: <br> - using concrete objects and pictorial representations, including those involving numbers, quantities and measures <br> - applying their increasing knowledge of mental and written methods |  | repeated addition, mental methods, and multiplication and division <br> - calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication $(\times)$, division $(\div)$ and equals (=) signs <br> - facts, including problems in contexts. |  |  |  |
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| Year 3 | Place Value WK1-3 <br> - count from 0 in multiples of $4,8,50$ and 100 ; find 10 or 100 more or less than a given number <br> - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <br> - compare and order numbers up to 1000 <br> - identify, represent and estimate numbers using different representations <br> - read and write numbers up to 1000 in numerals and in words <br> - solve number problems and practical problems involving these ideas. <br> Addition, <br> Subtraction WK4-6 | Addition, subtraction WK7-8 estimate the answer to a calculation and use inverse operations to check answers <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <br> Multiplication, Division WK9-12 <br> - recall and use multiplication and division facts for the 3,4 and 8 multiplication tables <br> - write and calculate mathematical statements for multiplication and | Multiplication, Division B WK1-3 <br> - solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. <br> Length <br> Perimeter WK4-6 <br> - measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ); volume/capacity (l/ml) | Fractions A WK7-9 <br> - Recap year 2 fractions unit <br> - count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing onedigit numbers or quantities by 10 <br> - recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators <br> Mass <br> Capacity WK10-12 <br> - measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ); volume/capacity (1/ml) | Fractions B WK1-2 <br> - recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators <br> - recognise and show, using diagrams, equivalent fractions with small denominators <br> - compare and order unit fractions, and fractions with the same denominators <br> - solve problems that involve all of the above. <br> - add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+$ $\left.\frac{1}{7}=\frac{6}{7}\right]$ | Shape WK8-9 <br> measure the perimeter of simple 2-D shapes <br> - draw 2-D shapes and make $3-\mathrm{D}$ shapes using modelling materials; recognise 3-D shapes in different orientations and describe them <br> - recognise angles as a property of shape or a description of a turn <br> - 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 <br> - identify horizontal and vertical lines and pairs of |


|  | - add and subtract numbers mentally, including: <br> - a three-digit <br> number and ones <br> - a three-digit <br> number and tens <br> - a three-digit <br> number and hundreds <br> - add and subtract numbers <br> with up to three digits, using formal written methods of columnar addition and subtraction | division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods |  |  | solve problems that involve all of the above. <br> Money WK3-4 <br> - add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts <br> Time WK5-7 <br> - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 -hour and 24 -hour clocks <br> - 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 <br> - know the number of seconds in a minute and the number of days in each month, year and leap year <br> - compare durations of events [for example to calculate the time taken by particular events or tasks]. | perpendicular and parallel lines. <br> Statistics WK10-11 <br> - interpret and present data using bar charts, pictograms and tables 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. |
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| Year 4 | Place Value WK1-4 <br> - count in multiples of 6, 7, 9, 25 and 1000 <br> - find 1000 more or less than a given number <br> - count backwards through zero to include negative numbers <br> - recognise the place value of each digit in a four-digit number <br> (thousands, hundreds, tens, and ones) <br> - order and compare numbers beyond 1000 <br> - identify, represent and estimate numbers using different representations <br> - round any number to the nearest 10,100 or 1000 <br> - solve number and practical problems that involve all of the above and with | Area WK8 <br> - find the area of rectilinear shapes by counting squares <br> Multiplication, Division A WK9-11 <br> - recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers | Multiplication, Division B WK1-3 <br> - recognise and use factor pairs and commutativity in mental calculations <br> - multiply two-digit and three-digit numbers by a one-digit number using formal written layout <br> - solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to mobjects. <br> Length /Perimeter WK4-5 | Fractions WK6-9 <br> - recognise and show, using diagrams, families of common equivalent fractions <br> - count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten <br> - solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number <br> - add and subtract fractions with the same denominator | Decimals B WK1-2 <br> - round decimals with one decimal place to the nearest whole number <br> - compare numbers with the same number of decimal places up to two decimal places <br> Money WK3-4 <br> - estimate, compare and calculate different measures, including money in pounds and pence <br> Time WK5-6 <br> - read, write and convert time between analogue and digital 12-and 24-hour clocks <br> - solve problems involving converting from hours to | Shape WK8-9 <br> - compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes <br> - identify acute and obtuse angles and compare and order angles up to two right angles by size <br> - identify lines of symmetry in 2-D shapes presented in different orientations <br> - complete a simple symmetric figure with respect to a specific line of symmetry. <br> Statistics WK10 <br> - solve comparison, sum and difference problems using information presented in |


|  | increasingly large positive numbers <br> - 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. <br> Addition, <br> Subtraction WK5-7 <br> - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> - estimate and use inverse operations to check answers to a calculation <br> - solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. |  | - Convert between different units of measure [for example, kilometre to metre; hour to minute] <br> - measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres | Fractions and Decimals A <br> WK10-12 <br> - recognise and write decimal equivalents of any number of tenths or hundredths <br> - recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}, \frac{3}{4}$ <br> - find the effect of dividing a one- or two-digit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths <br> - solve simple measure and money problems involving fractions and decimals to two decimal places. | minutes; minutes to seconds; years to months; weeks to days. | bar charts, pictograms, tables and other graphs. <br> - interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. <br> Position and Direction WK11-12 <br> - describe positions on a 2-D grid as coordinates in the first quadrant <br> - describe movements between positions as translations of a given unit to the left/right and up/down <br> - plot specified points and draw sides to complete a given polygon. |
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| Year 5 | Place Value WK1-3 <br> - read, write, order and compare numbers to at least 1000000 and determine the value of each digit <br> - count forwards or backwards in steps of powers of 10 for any given number up to 1000000 <br> - interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero <br> - round any number up to 1000000 to the nearest $10,100,1000,10000$ and 100000 <br> - solve number problems and practical problems that involve all of the above <br> - read Roman numerals to 1000 (M) and recognise years written in Roman numerals. | Multiplication, Division A WK6- <br> 8 <br> identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers <br> - know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers <br> - establish whether a number up to 100 is prime and recall prime numbers up to 19 <br> - multiply and divide whole numbers and those involving decimals by 10 , 100 and 1000 <br> - recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ${ }^{(3)}$ <br> - solve problems involving multiplication and division | Multiplication, Division B WK1- <br> $\underline{3}$ <br> - multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for twodigit numbers <br> - multiply and divide numbers mentally drawing upon known facts <br> - divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context <br> - solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <br> - solve problems involving multiplication and division, | Decimals <br> Percentages WK6-8 <br> - read and write decimal numbers as fractions [for example, $0.71=\frac{71}{-100}$ ] <br> - recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents <br> - round decimals with two decimal places to the nearest whole number and to one decimal place <br> - read, write, order and compare numbers with up to three decimal places <br> - recognise the per cent symbol (\%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal | Shape WK1-3 <br> - identify 3-D shapes, including cubes and other cuboids, from 2-D representations <br> - know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles <br> - draw given angles, and measure them in degrees $\left({ }^{\circ}\right)$ <br> - identify: <br> - angles at a point and one whole turn (total $360^{\circ}$ ) <br> - angles at a point on a straight line and $\frac{1}{2}$ a turn (total $180^{\circ}$ ) <br> - other multiples of $90^{\circ}$ <br> - use the properties of rectangles to deduce related facts and find missing lengths and angles | Number: negative numbers <br> WK9 <br> Converting Units of <br> Measurement WK10-11 <br> - convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) <br> - understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints <br> Volume WK12 <br> - estimate volume [for example, using $1 \mathrm{~cm}^{3}$ blocks to build cuboids (including cubes)] and capacity [for example, using water] |


|  | Addition, <br> Subtraction WK4-5 <br> - add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) <br> - add and subtract numbers mentally with increasingly large numbers <br> - use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy <br> - solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | including using their knowledge of factors and multiples, squares and cubes <br> Fractions A WK9-12 <br> - compare and order fractions whose denominators are all multiples of the same number <br> - identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths <br> - recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>1$ as a mixed number [for example, $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1$ $\left.\frac{1}{5}\right]$ | including scaling by simple fractions and problems involving simple rates. <br> Fractions B WK4-5 <br> - add and subtract fractions with the same denominator and denominators that are multiples of the same number <br> - multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | - solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}$, $\frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 . <br> Perimeter / Area WK9-10 measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres <br> - calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres $\left(\mathrm{cm}^{2}\right)$ and square metres $\left(\mathrm{m}^{2}\right)$ and estimate the area of irregular shapes <br> Statistics WK11-12 <br> - solve comparison, sum and difference problems using information presented in a line graph <br> - complete, read and interpret information in tables, including timetables. | distinguish between regular and irregular polygons based on reasoning about equal sides and angles. <br> Position and Direction WK4-5 identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. <br> Decimals WK6-8 <br> - solve problems involving number up to three decimal places | - solve problems involving converting between units of time <br> - use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. |
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| Year 6 | Place Value WK1-2 <br> - read, write, order and compare numbers up to 10000000 and determine the value of each digit <br> - round any whole number to a required degree of accuracy <br> - use negative numbers in context, and calculate intervals across zero <br> - solve number and practical problems that involve all of the above. <br> Addition, <br> Subtraction, Multiplication, | Fractions WK8-11 <br> - use common factors to simplify fractions; use common multiples to express fractions in the same denomination <br> - compare and order fractions, including fractions > 1 <br> - add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions <br> - multiply simple pairs of proper fractions, writing the answer in its simplest | Ratio WK1-2 <br> - solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts <br> - solve problems involving the calculation of percentages [for example, of measures, and such as $15 \%$ of 360 ] and the use of percentages for comparison <br> - solve problems involving similar shapes where the scale factor is known or can be found | Fraction, decimals \& Percentages WK7-8 <br> - solve problems involving the calculation of percentages [for example, of measures, and such as $15 \%$ of 360 ] and the use of percentages for comparison <br> - recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. | Shape WK1-3 <br> - draw 2-D shapes using given dimensions and angles <br> - recognise, describe and build simple 3-D shapes, including making nets <br> - compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons <br> - illustrate and name parts of circles, including radius, diameter and circumference and know | Investigative Work Finance for the Future Themed Projects |



