

Tooting Primary School Maths Curriculum

	Autumn	Spring	Summer
EYES	Number: - Continue, copy and create repeating patterns - Continue an ABC/ABB/ABBC pattern - Copy an ABC/ABB/ABBC pattern - Make own ABC/ABB/ABBC patterns - Identify the unit of repeat in a pattern - Continue a pattern which ends mid-unit of repeat - Compare numbers - more, less, greater, fewer - Count objects, actions and sounds. ...count - Subitise up to 5 - Explore the composition of numbers to 5 - Part-whole: identify smaller numbers within a number (conceptual subitising) - total, altogether, makes, equals - Inverse operations (understand that we can partition a number of things into two groups, and to recognise that those groups can be recombined to make the same total) - set, group, part, whole, total - Understand that a number can be partitioned into different pairs of numbers (number bonds up to 5) - Link the number symbol (numeral) with its cardinal number value. - Begin to count beyond ten - Begin to count on and back from a given number - Solve real world mathematical problems with numbers up to 5 Numerical patterns: - Begin to describe properties of 2D and 3D shapes - circle, square, rectangle, triangle, oval, hexagon, semi-circle, sides, corners, cube, cuboid, cylinder, faces, vertices, edges - Begin to compare length, weight and capacity, length, height, weight - Recognise attributes, e.g.. use language of weight, length, height or capacity - heavy / light, short/tall, long large, thick, thin, wide, narrow - Compare and begin to order 2-3 items by length, weight, height and capacity e.g. It is taller / shorter than... taller, tallest, shorter, shortest, longer, longest, heavier, heaviest - Begin to estimate and predict using measurement - some, less, a bit, all, most, both, few, enough, half, whole	Number: - Continue, copy and create repeating patterns - Identify errors in an ABC/ABB/ABBC pattern. - Begin to symbolise their patterns and the unit of repeat - pattern, draw, unit of repeat - Make a pattern which continues around a circle. - Count beyond ten □ count on and back from a given number - Understand the 'one more than/one less than' relationship between consecutive numbers - Compare numbers that are far apart, near to and next to each other. ...more, less, far apart, close to, next to - Use "more" and "fewer" to explain unfair sharing...more, less, fewer, fair, unfair, same, different - Explore the composition of numbers to 10 - Automatically recall number bonds for numbers 0–10. - Understand that a number can be partitioned into different pairs of numbers (number bonds to 10) - Recognises the relationship between size and number of units - smaller, bigger, more, less, fewer - Understand that a number can be partitioned into more than two numbers. - Solve problems using their knowledge of number bonds to 5 and begin to solve problems using number bonds to 10 Numerical patterns: - Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. - Describe properties of 2D and 3D shapes. - plus cone, pyramid, sphere - Select, rotate and manipulate shapes in order to develop spatial reasoning skills. - Compare length, weight and capacity - Order 2-3 items by length, weight, height or capacity - Estimate / predict using measurement language - Begin to use non-standard units to compare things - measure, - Begin to use time to sequence events - first, second, third, then, next, after, later, before - Begin to use tools to measure short lengths of time	Number: - Have a deep understanding of number to 10, including the composition of each number - Subitise (recognise quantities without counting) up to 5 confidently - 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. - group, set, part, whole, double - Solve problems using their knowledge of number bonds to 5/10. Numerical patterns: - 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 - same as, equal to, more than, greater than, less than, fewer than - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally - odd, even, double, half, fair, unfair, equal, unequal, greater, more, less, fewer

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Place Value within 10 Count to and across 10, forwards and backwards, beginning with 0 or 1, or from any given number. Given a number, identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Addition and Subtraction within 10 Represent and use number bonds and related subtraction facts within 10 Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs	Addition and Subtraction within 10 Represent and use number bonds and related subtraction facts within 10 Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs Shape Recognise and name common 2-D and 3-D shapes, including: <i>2-D shapes [for example, rectangles (including squares), circles and triangles]</i> <i>3-D shapes [for example, cuboids (including cubes), pyramids and spheres].</i>	Place Value within 20 Count to and across 20, forwards and backwards, beginning with 0 or 1, or from any given number. Given a number, identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Read and write numbers from 1 to 20 in numerals and words Addition and Subtraction within 20 Represent and use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.	Place Value within 50 Count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number. Given a number, identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Length and Height Compare, describe and solve practical problems for length and heights. Measure and begin to record the following length and heights. Mass and Volume Compare, describe and solve practical problems for mass and volume. Measure and begin to record the following mass and volume.	Multiplication and Division Count in multiples of twos, fives and tens. 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. Fractions Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. Position and Direction Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	Place Value within 100 Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Given a number, identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Money Recognise and know the value of different denominations of coins and notes. Time Sequence events in chronological order using language Recognise and use language relating to dates, including days of the week, weeks, months and years Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

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Year 2	Place Value Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Recognise the place value of each digit in a two-digit number (tens, ones) identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs Read and write numbers to at least 100 in numerals and in words Use place value and number facts to solve problems. Addition and Subtraction Recall and use addition and subtraction facts to 2.0 Fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * add three one-digit numbers.	Addition and Subtraction Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and Use this to check calculations and solve missing number problems. Shape Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D and 3-D shapes and everyday objects.	Money Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change Multiplication and Division Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Length and Height Compare and order lengths, and record the results using >, < and = Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); nearest appropriate unit, using rulers Mass, capacity and temperature Compare and order mass, volume/capacity and record the results using >, < and = Choose and use appropriate standard units to estimate and measure mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using scales, thermometers and measuring vessels	Fractions Recognise, find, name and write fractions of a length, shape, set of objects or quantity Write simple fractions. Time Compare and sequence intervals of time Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times Know the number of minutes in an hour and the number of hours in a day.	Statistics Interpret and construct simple pictograms, tally charts, block diagrams and simple tables 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. Position and Direction Order and arrange combinations of mathematical objects in patterns and sequences. Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).

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Year 3	Place Value Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number Recognise the place value of each digit in a three-digit number Compare and order numbers up to 1000 Identify, represent and estimate numbers using different representations Read and write numbers up to 1000 in numerals and in words Solve number problems and practical problems involving these ideas. Addition and Subtraction Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Addition and Subtraction Estimate the answer to a calculation and use inverse operations to check answers Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Multiplication and Division Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Multiplication and Division Write and calculate mathematical statements for multiplication and 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, 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. Length and Perimeter Measure, compare, add and subtract: lengths (m/cm/mm) Measure the perimeter of simple 2-D shapes	Fractions Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Mass and Capacity Measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)	Fractions Add and subtract fractions with the same denominator within one whole Compare and order unit fractions, and fractions with the same denominators Solve problems that involve all of the above. Money Add and subtract amounts of money to give change, using both £ and p in practical contexts Time Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks Estimate and read time with increasing accuracy to the nearest minute; record and	Time Compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight Know the number of seconds in a minute and the number of days in each month, year and leap year Compare durations of events Shape Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them Recognise angles as a property of shape or a description of a turn 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 Identify horizontal and vertical lines and pairs of perpendicular and parallel lines Statistics interpret and present data using bar charts, pictograms and tables Solve one-step and two-step questions Using information presented in scaled bar charts and pictograms and tables.

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Year 4	Place Value Count in multiples of 6, 7, 9, 25 and 1000 Find 1000 more or less than a given number Count backwards through zero to include negative numbers Recognise the place value of each digit in a four-digit number Order and compare numbers beyond 1000 Identify, represent and estimate numbers using different representations Round any number to the nearest 10, 100 or 1000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers 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. Addition and Subtraction Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Estimate and use inverse operations to check answers to a calculation Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Area Find the area of rectilinear shapes by counting squares Multiplication and Division Recall multiplication and division facts for multiplication tables up to 12×12	Multiplication and Division 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 Recognise and use factor pairs and commutativity in mental calculations Multiply two-digit and three-digit numbers by a one-digit number using formal written layout 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 m objects. Length and Perimeter Convert between different units of measure Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Fractions Recognise and show, using diagrams, families of common equivalent fractions Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 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 Add and subtract fractions with the same denominator Recognise and write decimal equivalents of any number of tenths or hundredths Decimals Recognise and write decimal equivalents to 4 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 Round decimals with one decimal place to the nearest whole number	Decimals Compare numbers with the same number of decimal places up to two decimal places Solve simple measure and money problems involving fractions and decimals to two decimal places Money 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 Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Shape Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identify acute and obtuse angles and compare and order angles up to two right angles by size Identify lines of symmetry in 2-D shapes presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry. Statistics Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Position and Direction Describe positions on a 2-D grid as coordinates in the first quadrant Describe movements between positions as translations of a given unit to the left/right and up/down Plot specified points and draw sides to complete a given polygon

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Year 5	Place Value Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Solve number problems and practical problems that involve all of the above Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Addition and Subtraction Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Multiplication and Division Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite Establish whether a number up to 100 is prime and recall prime numbers up to 19 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 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 Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Fractions Compare and order fractions whose denominators are all multiples of the same number Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Multiplication and Division Recognise and use square numbers and cube numbers, and the notations Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. Fractions Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Read and write decimal numbers as fractions Decimals and Percentages Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Solve problems involving number up to three decimal places 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 Solve problems which require knowing percentage and decimal equivalents and those fractions with a denominator of a multiple of 10 or 25.	Perimeter and Area Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes Statistics Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables.	Shape Identify 3-D shapes, including cubes and other cuboids, from 2-D representations Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees Identify angles at a point and one whole turn Identify angles at a point on a straight line and half turn or other multiples of 90o Use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Position and Direction 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 Decimals Round decimals with two decimal places to the nearest whole number and to one decimal place Read, write, order and compare numbers with up to three decimal places	Negative Numbers Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero Converting Units Convert between different units of metric measure Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Solve problems involving converting between units of time Use all four operations to solve problems involving measure using decimal notation, including scaling. Volume Estimate volume and capacity

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Year 6	Place Value Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit Round any whole number to a required degree of accuracy Use negative numbers in context, and calculate intervals across zero Solve number and practical problems that involve all of the above. Addition, Subtraction, Multiplication and Division Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context Perform mental calculations, including with mixed operations and large numbers Identify common factors, common multiples and prime numbers Use their knowledge of the order of operations to carry out calculations involving the four operations Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Fractions Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions > 1 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Multiply simple pairs of proper fractions, writing the answer in its simplest form Divide proper fractions by whole numbers Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction Converting Units Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places Convert between miles and kilometres	Ratio Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts Solve problems involving the calculation of percentages and the use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. Algebra Use simple formulae 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. Decimals 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 Multiply one-digit numbers with up to two decimal places by whole numbers	Fractions, Decimals and Percentages Use written division methods in cases where the answer has up to two decimal places Solve problems which require answers to be rounded to specified degrees of accuracy Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Area, Perimeter and Volume Recognise that shapes with the same areas can have different perimeters and vice versa Recognise when it is possible to use formulae for area and volume of shapes Calculate the area of parallelograms and triangles Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres and extending to other units Statistics Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average.	Shape Draw 2-D shapes using given dimensions and angles Recognise, describe and build simple 3-D shapes, including making nets Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Position and Direction Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. Problem Solving, Reasoning and Consolidation