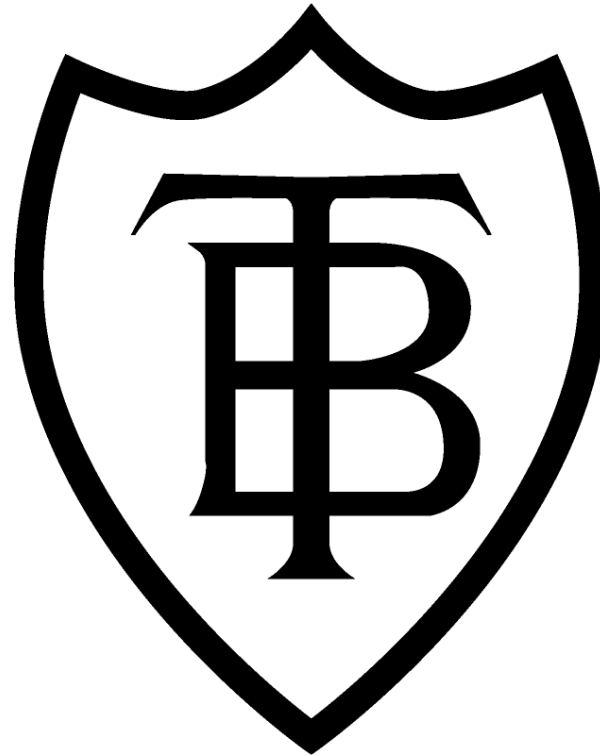


Bapchild and Tonge CEP School

Long Term Plan for Maths



1	2	3	4	5	6
Foundation					
See Foundation stage curriculum					

Year 1					
Number and place value (2-3 weeks) -read and write numbers from 1 to 20 in numerals and words. -count, read and write in multiples of two -given a number, identify one more and one less -identify and represent numbers using objects and pictorial representations Addition and subtraction (2 weeks) -read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs -represent and use number bonds within 10 -add and subtract one-digit to one-digit to 10, including zero -solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations Geometry - Position and Direction (1 week) -describe position, direction and movement, including whole and half turns. Geometry – Properties of shapes (2 weeks) -recognise (using properties) and name 2-D and 3-D shapes fluently in relation to everyday objects	Multiplication and division (2 weeks) -solve one step problems involving multiplication (grouping) and division (sharing) by calculating the answer using concrete objects Fractions (1 week) -recognise, find and name a half as one of two equal parts of an object or shape -recognise, find and name a quarter as one of four equal parts of an object or shape Measurement (3 weeks) -compare, describe and solve practical problems for: *lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] *capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] *mass/weight [for example, heavy/light, heavier than, lighter than] *time [for example, quicker, slower, earlier, later] -sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] -recognise and use language relating to dates, including days of the week, weeks, months and years Assessment (1 week)	Number and place value (2 weeks) -count, read and write numbers from 1 to 50 in numerals. -count, read and write in multiples of twos and tens -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 (1-2 weeks) -read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs -represent and use number bonds and related subtraction facts within 10 -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 begin to use number lines Geometry - Position and Direction (1 week) -describe position, direction and movement, including whole, half, quarter and three-quarter turns. Geometry – Properties of shapes (1-2 weeks) -recognise (using properties) and name 2-D and 3-D shapes fluently in relation to everyday objects -recognise these shapes in different orientations and sizes	Multiplication and division (2 weeks) -solve one step problems involving multiplication (grouping) and division (sharing) by calculating the answer using concrete objects, pictorial representations Fractions (1 week) -recognise, find and name a half or quarter of an object, shape or quantity Measurement (3 weeks) -measure and begin to record the following: *lengths and heights *capacity and volume *mass/weight *time (hours, minutes, seconds) -recognise and know the value of different denominations of coins and notes -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.	Number and place value (1-2 weeks) -count, read and write numbers to 100 in numerals -count in multiples of twos, fives and tens -count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number -identify and represent numbers using a number line, and use the language of: equal to, more than, less than (fewer), most, least Addition and subtraction (1-2 weeks) -read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs -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 number lines, and missing number problems such as $7 = \square - 9$. Geometry - Position and Direction (1 week) -describe position, direction and movement, including whole, half, quarter and three-quarter turns. Geometry – Properties of shapes (1 week) -recognise and name common 2-D and 3-D shapes, including: *2-D shapes (for example, rectangles (including squares); circles and triangles) *3-D shapes (for example, cuboids (including cubes); pyramids and spheres)	Multiplication and division (2 weeks) -solve one step problems involving multiplication (grouping) and division (sharing) by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher Fractions (1-2 weeks) -recognise, find and name a half or quarter of an object, shape or quantity Measurement (3 weeks) -measure and solve practical problems, beginning to record the following: *lengths and heights *capacity and volume *mass/weight *time (hours, minutes, seconds) -recognise and know the value of different denominations of coins and notes -tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

Year 2					
Number and place value (2 weeks) -count in steps of 2 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 and represent numbers using different representations, including the number line -compare and order numbers from 0 up to 100 using vocabulary (e.g. greater than, less than) -read and write numbers to at least 100 in numerals Addition and subtraction (2 weeks) -recall and use addition and subtraction facts to 20 fluently -add and subtract numbers using concrete objects, pictorial representations, and mentally, including: * a two-digit number and ones * a two-digit number and tens -show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot -solve problems with addition and subtraction: *using concrete objects and pictorial representations, including those involving numbers and quantities *applying their increasing knowledge of mental and written methods (number line, partitioning) Geometry - Position and Direction (1 week) -order and arrange combinations of mathematical objects in patterns and sequences	Multiplication and division (2 weeks) -recall and use multiplication and division facts for the 2 and 10 multiplication tables, including recognising odd and even numbers -calculate mathematical statements for multiplication and division within the multiplication tables (x2, x10) 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 Fractions (1-2 weeks) -recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ of a shape, set of objects or quantity -write simple fractions for example, $\frac{1}{2}$ of 6 = 3 Measurement (2-3 weeks) -choose and use appropriate standard units to estimate and measure length/height (m/cm); mass (kg/g); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales and measuring vessels -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	Number and place value (1-2 weeks) -count in steps of 2 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 to 50 Addition and subtraction (2 weeks) -recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 50 -add and subtract numbers using concrete objects, pictorial representations, and mentally, including: * a two-digit number and tens *two two-digit numbers *adding three one-digit numbers -recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. -solve problems (including money) with addition and subtraction: *using concrete objects and pictorial representations, including those involving numbers, quantities and measures *applying their increasing knowledge of mental and written methods (number line, partitioning)	Multiplication and division (2 weeks) -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 (x2, x5, x10) 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 (including money) involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. Fractions (1 week) -recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ of a length, shape, set of objects or quantity -write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ Measurement (2 weeks) -choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); to the nearest appropriate unit, using rulers, scales, thermometers -compare and order lengths and mass and record the results using >, < and =	Number and place value (1 weeks) -count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward -use place value and number facts to solve problems -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 to 100 Addition and subtraction (1-2 weeks) -recall and use addition and subtraction facts to 20 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 tens *two two-digit numbers *adding three one-digit numbers -recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. -solve problems (including money) with addition and subtraction: *using concrete objects and pictorial representations, including those involving numbers, quantities and measures *applying their increasing knowledge of mental and written methods (number line, partitioning)	Multiplication and division (2 weeks) -recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables -calculate mathematical statements for multiplication and division within the multiplication tables (x2, x5, x10) and write them using the multiplication (×), division (÷) and equals (=) signs -solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. Fractions (2 weeks) -recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ of a length, shape, set of objects or quantity -write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ Measurement (3 weeks) -choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels -compare and order lengths, mass, volume/capacity and record the results using >, < and = -recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value

-use mathematical vocabulary to describe position, direction and movement Geometry – Properties of shapes (2 weeks) -identify and describe the properties of 2-D shapes, including the number of sides and vertices -identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces -compare and sort common 2-D and 3-D shapes and everyday objects.	-compare and sequence intervals of time -know the number of minutes in an hour and the number of hours in a day Statistics (1 week) -interpret and construct simple pictograms, tally charts and simple tables Assessment (1 week)	Geometry - Position and Direction (1 week) -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 anti-clockwise) Geometry – Properties of shapes (2 weeks) -identify and describe the properties of 2-D shapes, including the number of sides, vertices 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 sequence intervals of time -know the number of minutes in an hour and the number of hours in a day -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 Statistics (1 week) -interpret and construct tally charts, block diagrams (ratios of 2,5,10) and simple tables -ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	Geometry - Position and Direction (1 week) -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 anti-clockwise) Geometry – Properties of shapes (1 week) -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. Assessment (1-2 weeks)	-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 -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 Statistics (1 week) -interpret 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
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Year 3					
Number and place value (2 weeks) -recognise the place value of each digit in a three-digit number (hundreds, tens, ones) -read and write numbers up to 1000 in numerals and in words -compare and order numbers up to 1000 -identify, represent and estimate numbers using different representations (U&A) -solve number problems and practical problems involving these ideas. -count from 0 in multiples of 4 and 100; find 10 or 100 more or less than a given number Addition and subtraction (2 weeks) -add and subtract numbers mentally, including: *a three-digit number and ones -add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction (see calculation policy) -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 -add and subtract amounts of money to give change, using both £ and p in practical contexts (measurement objective) Statistics (1 week) -interpret and present data using bar charts, pictograms and tables	Fractions (2-3 weeks) -recognise, find and write fractions of a discrete set of objects: unit fractions -compare and order unit fractions (e.g. $\frac{1}{5}$ is less than $\frac{1}{3}$), and fractions with the same denominators (e.g. $\frac{6}{8}$ is greater than $\frac{2}{8}$) -recognise and show, using diagrams, equivalent fractions with small denominators -count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts -recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators -solve problems that involve all of the above. Measurement (2 weeks) -measure and compare, lengths (m/cm/mm) -measure the perimeter of simple 2-D shapes -tell and write the time from an analogue clock, including using Roman numerals from I to XII -estimate and read time with increasing accuracy to the nearest minute -use vocabulary such as o'clock, morning, afternoon, noon and midnight -know the number of seconds in a minute and the number of days in each month Geometry – Properties of shapes (1-2 weeks) -draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and	Number and place value (1 week) -recognise the place value of each digit in a three-digit number (hundreds, tens, ones) -read and write numbers up to 1000 in numerals and in words -compare and order numbers up to 1000 -identify, represent and estimate numbers using different representations (U&A) -solve number problems and practical problems involving these ideas. -count from 0 in multiples of 4, 8, and 100; find 10 or 100 more or less than a given number Addition and subtraction (2 weeks) -add and subtract numbers mentally, including: *a three-digit number and tens -add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction (see calculation policy) -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 -add and subtract amounts of money to give change, using both £ and p in practical contexts (measurement objective) -add and subtract lengths (measurement objective) Statistics (1 week) -interpret and present data	Fractions (2 weeks) -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 -recognise and show, using diagrams, equivalent fractions with small denominators -solve problems that involve all of the above. Measurement (2 weeks) -measure and compare mass (kg/g); volume/capacity (l/ml) -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 compare time in terms of seconds, minutes and hours -know the number of seconds in a minute and the number of days in each month, year and leap year Geometry – Properties of shapes (2 weeks) -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	Number and place value (1 week) -recognise the place value of each digit in a three-digit number (hundreds, tens, ones) -read and write numbers up to 1000 in numerals and in words -compare and order numbers up to 1000 -identify, represent and estimate numbers using different representations (U&A) -solve number problems and practical problems involving these ideas. -count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number Addition and subtraction (1-2 weeks) -add and subtract numbers mentally, including: *a three-digit number and hundreds -add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction (see calculation policy) -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 -add and subtract amounts of money to give change, using both £ and p in practical contexts (measurement objective) -add and subtract mass and volume/capacity (measurement objective)	Fractions (2 weeks) -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 -recognise and show, using diagrams, equivalent fractions with small denominators -count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts -add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] -solve problems that involve all of the above. Measurement (2 weeks) -measure and compare lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) -measure the perimeter of simple 2-D shapes -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 compare time in terms of seconds, minutes and hours -compare durations of events [for example to calculate the time taken by particular events or tasks]. Geometry – Properties of shapes (2 weeks) -draw 2-D shapes and

-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. Multiplication and division (2-3 weeks) -recall and use multiplication and division facts for 4 multiplication tables -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 methods (see calculation policy) -solve problems, including missing number problems, involving multiplication and division	describe them Assessment (1 week)	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. Multiplication and division (2 weeks) -recall and use multiplication and division facts for the 3 and 4 multiplication tables -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 (see calculation policy) -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 (see non-statutory notes)	of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	Multiplication and division (1-2 weeks) -recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables -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 (see calculation policy) -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 (see non-statutory notes) Assessment (1 week)	make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them -identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Statistics (1 week) -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					
Number and place value (2 weeks) -recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) -order and compare numbers beyond 1000 -identify, represent and estimate numbers using different representations -solve number and practical problems that involve all of the above and with increasingly large positive numbers -count in multiples of 9 and 1000 -find 1000 more or less than a given number -round any number to the nearest 10, 100 or 1000 -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 (2 weeks) -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. Statistics (1 week) -interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and	Fractions (including decimals) (2 weeks) -count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. -recognise and write decimal equivalents of any number of tenths or hundredths -recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ -recognise and show, using diagrams, families of common equivalent fractions -solve problems involving increasingly harder fractions to calculate quantities Measurement (2 weeks) -Convert between different units of measure for length [for example, kilometre to metre] -estimate, compare and calculate different measures, including money in pounds and pence -measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres -read, write and convert time between analogue and digital 12- and 24-hour clocks Geometry – Properties of shapes (2 weeks) -compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes -identify lines of symmetry in 2-D shapes	Number and place value (1 week) -recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) -order and compare numbers beyond 1000 -identify, represent and estimate numbers using different representations -solve number and practical problems that involve all of the above and with increasingly large positive numbers -count in multiples of 6, 9, 25 and 1000 -find 1000 more or less than a given number -round any number to the nearest 10, 100 or 1000 Addition and subtraction (2 weeks) -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. Statistics (1 week) -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.	Fractions (including decimals) (2 weeks) -recognise and write decimal equivalents of any number of tenths or hundredths -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 -compare numbers with the same number of decimal places (1dp) -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 Measurement (2 weeks) -Convert between different units of measure for mass and time [for example, kg to g; hour to minute] -estimate, compare and calculate different measures, including money in pounds and pence -find the area of rectilinear shapes by counting squares -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. Geometry – Properties of shapes (1 week) -identify lines of symmetry in 2-D shapes presented in different orientations	Number and place value (1 week) -recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) -order and compare numbers beyond 1000 -identify, represent and estimate numbers using different representations -solve number and practical problems that involve all of the above and with increasingly large positive numbers -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 Addition and subtraction (1-2 weeks) -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. Multiplication and division (1-2 weeks) -recall multiplication and division facts for multiplication tables up to 12×12 -use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1;	Fractions (including decimals) (2 weeks) -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 -compare numbers with the same number of decimal places up to two decimal places -add and subtract fractions with the same denominator -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 -solve simple measure and money problems involving fractions and decimals to two decimal places. Measurement (2 weeks) -Convert between different units of measure for length, mass, time and volume/capacity [for example, kilometre to metre; hour to minute] -estimate, compare and calculate different measures, including money in pounds and pence -measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres -find the area of rectilinear shapes by counting squares -read, write and convert time between analogue and digital 12- and 24-hour clocks

time graphs. Multiplication and division (2-3 weeks) -recall multiplication and division facts for 9 and 11 multiplication tables -use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 and dividing by 1 -recognise and use factor pairs and commutativity in mental calculations -multiply two-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	Assessment (1 week)	Multiplication and division (2 weeks) -recall multiplication and division facts for 6, 9 and 11 multiplication tables -use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 and dividing by 1 -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 -divide two-digit numbers with exact answers (no remainders) 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	-complete a simple symmetric figure with respect to a specific line of symmetry. -identify acute and obtuse angles Geometry - Position and Direction (1 week) -describe positions on a 2-D grid as coordinates in the first quadrant -plot specified points and draw sides to complete a given polygon.	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 -divide three-digit numbers with exact answers (no remainders) 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 Assessment (1 week)	Geometry – Properties of shapes (2 weeks) -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 Geometry - Position and Direction (1 week) -plot specified points and draw sides to complete a given polygon. -describe movements between positions as translations of a given unit to the left/right and up/down Statistics (1 week) -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.
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Year 5					
Number and place value (1 week) -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 (2 weeks) -add and subtract numbers mentally with increasingly large numbers -add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) -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. Statistics (1 week) -solve comparison, sum and difference problems using information presented in a line graph -complete, read and interpret information in	Fractions (2 weeks) -read, write, order and compare numbers with up to three decimal places -recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents -read and write decimal numbers as fractions [for example, $0.71 = 71/100$] -round decimals with two decimal places to the nearest whole 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 [for example, $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$] -add and subtract fractions with the same denominator Measurement (2 weeks) -convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) -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 (cm^2) and square metres (m^2) -solve problems involving converting between units of time -use all four operations to	Number and place value (1-2 weeks) -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 and 1000 -interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero -solve number problems and practical problems that involve all of the above Addition and subtraction (1-2 weeks) -add and subtract numbers mentally with increasingly large numbers -add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) -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. Statistics (1 week) -solve comparison, sum and difference problems using information presented in a line graph -complete, read and	Fractions (2 weeks) -read, write, order and compare numbers with up to three decimal places -solve problems involving number up to three decimal places -round decimals with two decimal places to the nearest whole number and to one decimal place -compare and order fractions whose denominators are all multiples of the same number -add and subtract fractions with the same denominator and denominators that are multiples of the same number -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 of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ Measurement (2 weeks) -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 [for example, length, mass, volume, money] using decimal notation, including scaling Geometry – Properties of shapes (1 week) -identify 3-D shapes,	Number and place value (1 week) -read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit -round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 -interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero -solve number problems and practical problems that involve all of the above Addition and subtraction (1-2 weeks) -add and subtract numbers mentally with increasingly large numbers -add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) -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 (1-2 weeks) -recognise and use square numbers and cube numbers, and the notation for squared (^2) and cubed (^3) -solve problems involving	Fractions (2 weeks) -solve problems involving number up to three decimal places -add and subtract fractions with the same denominator and denominators that are multiples of the same number -multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams -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 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. Measurement (2 weeks) -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 (cm^2) and square metres (m^2) and estimate the area of irregular shapes -estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] -solve problems involving converting between units of time -use all four operations to solve problems involving

tables, including timetables. Multiplication and division (2-3 weeks) -identify multiples and factors, including finding all factor pairs of a number -know and use the vocabulary of prime numbers -establish whether a number up to 100 is prime and recall prime numbers up to 19 -recognise and use square numbers and the notation 2 () -multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 -multiply and divide numbers mentally drawing upon known facts -multiply numbers up to 4 digits by a one- or two-digit number using a formal written method -divide numbers up to 4 digits by a one-digit number using the formal written method of short division , introducing remainders -solve problems involving multiplication and division including using their knowledge of factors, multiples and squares -solve problems involving multiplication and division -solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. Geometry – Properties of shapes (2 weeks) -identify 3-D shapes, including cubes and other cuboids, from 2-D representations -distinguish between regular and irregular polygons based on reasoning about equal sides and angles. -know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles -identify: *angles at a point and one whole turn (total 360) Assessment (1 week)	interpret information in tables, including timetables. Multiplication and division (2 weeks) -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 (non-prime) numbers -multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 -multiply and divide numbers mentally drawing upon known facts -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 -solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. -solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	including cubes and other cuboids, from 2-D representations -distinguish between regular and irregular polygons based on reasoning about equal sides and angles. -use the properties of rectangles to deduce related facts and find missing lengths and angles -draw given angles, and measure them in degrees (°) Geometry - Position and Direction (1 week) -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.	multiplication and division including using their knowledge of factors and multiples, squares and cubes -multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 -multiply and divide numbers mentally drawing upon known facts -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 -solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. -solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Assessment (1 week)	measure [for example, length, mass, volume, money] using decimal notation, including scaling Geometry – Properties of shapes (2 weeks) -identify 3-D shapes, including cubes and other cuboids, from 2-D representations -use the properties of rectangles to deduce related facts and find missing lengths and angles -identify: *angles at a point and one whole turn (total 360) *angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) *other multiples of 90° Geometry - Position and Direction (1 week) -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. Statistics (1 week) -solve comparison, sum and difference problems using information presented in a line graph -complete, read and interpret information in tables, including timetables.
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Year 6					
Number and place value (1 week) -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 and subtraction (1 week) -perform mental calculations, including with mixed operations and large numbers -solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why -use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Statistics (1 week) -calculate and interpret the mean as an average. -interpret and line graphs and use these to solve problems Multiplication and division (2 weeks) -perform mental calculations, including with mixed operations and large numbers -multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places -identify common factors,	Ratio and Proportion (1 week) -solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison -solve problems involving similar shapes where the scale factor is known or can be found Measurement (2 weeks) -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 -solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate -recognise that shapes with the same areas can have different perimeters and vice versa Geometry – Properties of shapes (2 weeks) -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 Geometry – Position and Direction (1 week) -describe positions on the full coordinate grid (all four quadrants)	Number and place value (1 week) -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 and subtraction (1 week) -perform mental calculations, including with mixed operations and large numbers -solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why -use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Statistics (1 week) -calculate and interpret the mean as an average. -interpret and construct pie charts and line graphs and use these to solve problems Multiplication and division (1 week) -perform mental calculations, including with mixed operations and large numbers -multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written	Algebra (1 week) -use simple formulae -express missing number problems algebraically Measurement (2 weeks) -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 -solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate -convert between miles and kilometres -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 (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³]. Geometry – Properties of shapes (2 weeks) -compare and classify geometric shapes based on their properties and sizes -find unknown angles in any triangles, quadrilaterals, and regular polygons -recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	Number and place value (M/O and throughout) -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 Addition and subtraction (1 week) -perform mental calculations, including with mixed operations and large numbers -solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why -use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Statistics (1 week) -interpret and construct pie charts and line graphs and use these to solve problems Multiplication and division (1 week) -perform mental calculations, including with mixed operations and large numbers -multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication -multiply one-digit numbers with up to two decimal places by whole numbers	Ratio and Proportion (1 week) -solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. -solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts Algebra (2 weeks) -generate and describe linear number sequences -find pairs of numbers that satisfy an equation with two unknowns -enumerate possibilities of combinations of two variables. Measurement (1 week) -calculate the area of parallelograms and triangles -calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³]. Geometry – Properties of shapes (2 weeks) -find unknown angles in any triangles, quadrilaterals, and regular polygons -recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. -illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

common multiples and prime numbers -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 -use their knowledge of the order of operations to carry out calculations involving the four operations -solve problems involving addition, subtraction, multiplication and division Fractions (including decimals and percentages) (2 weeks) -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) -solve problems which require answers to be rounded to specified degrees of accuracy -associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] -recall and use equivalences between simple fractions, decimals	-draw and translate simple shapes on the coordinate plane, and reflect them in the axes. Assessment (1 week)	method of long multiplication -multiply one-digit numbers with up to two decimal places by whole numbers (Fractions (including decimals and percentages) objectives) -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 -use written division methods in cases where the answer has up to two decimal places (Fractions (including decimals and percentages) objectives) -use their knowledge of the order of operations to carry out calculations involving the four operations -solve problems involving addition, subtraction, multiplication and division Fractions (including decimals and percentages) (2 weeks) -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) -solve problems which require answers to be rounded to specified degrees of accuracy -use common factors to simplify fractions; use common multiples to	Geometry – Position and Direction (1 week) -describe positions on the full coordinate grid (all four quadrants) (co-ordinates for missing vertices) -draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	(Fractions (including decimals and percentages) objectives) -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 -use written division methods in cases where the answer has up to two decimal places (Fractions (including decimals and percentages) objectives) -use their knowledge of the order of operations to carry out calculations involving the four operations -solve problems involving addition, subtraction, multiplication and division Fractions (including decimals and percentages) (1 week) -multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] -divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] Assessment (1 week)	Geometry – Position and Direction (1 week) -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.
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and percentages, including in different contexts. -use common factors to simplify fractions; use common multiples to express fractions in the same denomination -compare and order fractions, including fractions > 1		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 (<i>link to probability 2014-15</i>)			
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