KS2 Maths medium term plan Autumn 1

Unit	Year 3	
Place value (3.5 weeks)	recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) read and write numbers up to 1,000 in numerals and in words count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number identify, represent and estimate numbers using different representations compare and order numbers up to 1,000 solve number problems and practical problems involving these ideas	
Small steps	Represent numbers to 100 Partition numbers to 100 Number line to 100 Hundreds Represent numbers to 1,000 Partition numbers to 1,000 Flexible partitioning of numbers to 1,000	Hundreds, tens and ones Find 1, 10 or 100 more or less Number line to 1,000 Estimate on a number line to 1,000 Compare numbers to 1,000 Order numbers to 1,000 Count in 50s
Vocabulary and resources	Hundreds, tens, ones, represent, digit, partition, addition, whole, part, identify, estimate, equivalent, position, interval, start point, end point, multiple, placeholder, value, exchange, numerals, words, more, less, compare, greater than, less than, order, group, part-whole model	Place value counters, base 10, bead strings, straws, numicon, digit cards, part whole models, number lines, tens frames, arrow cards
Addition and subtraction (3 weeks)	add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	
Small steps	Apply number bonds within 10 Add and subtract 1s Add and subtract 10s Add and subtract 100s Spot the pattern Add 1s across a 10 Add 10s across a 100 Subtract 1s across a 10 Subtract 10s across a 100 Make connections Add two numbers (no exchange)	Subtract two numbers (no exchange) Add two numbers (across a 10) Add two numbers (across a 100) Subtract two numbers (across a 10) Subtract two numbers (across a 100) Add 2-digit and 3-digit numbers Subtract a 2-digit number from a 3-digit number Complements to 100 Estimate answers Inverse operations Make decisions
Vocabulary and resources	Addition, subtraction, number bonds, whole, part, mentally, calculation, increase, decrease, inverse, operation, multiple, exchange, estimate	Base 10, place value counters, double sided counters, number lines, part whole models, bar models, number cards

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Unit	Year 4	
Place value (3.5 weeks)	recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value count in multiples of 6, 7, 9, 25 and 1,000 find 1,000 more or less than a given number count backwards through 0 to include negative numbers identify, represent and estimate numbers using different representations order and compare numbers beyond 1,000 round any number to the nearest 10, 100 or 1,000 solve number and practical problems that involve all of the above with increasingly large positive numbers count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 round decimals with 1 decimal place to the nearest whole number compare numbers with the same number of decimal places up to 2 decimal places	
Small steps	Represent numbers to 1,000 Partition numbers to 1,000 Number line to 1,000 Thousands Represent numbers to 10,000 Partition numbers to 10,000 Flexible partitioning of numbers to 10,000 Find 1, 10, 100, 1,000 more or less Number line to 10,000 Estimate on a number line to 10,000 Compare numbers to 10,000 Order numbers to 10,000 Roman numerals Round to the nearest 10 Round to the nearest 100	Round to the nearest 1,000 Round to the nearest 10, 100 or 1,000 Tenths as decimals Tenths on a place value chart Tenths on a number line Hundredths as decimals Hundredths on a place value chart Make a whole with tenths Make a whole with hundredths Partition decimals Flexibly partition decimals Compare decimals Order decimals Round to the nearest whole number
Vocabulary and resources	Thousands, Hundreds, tens, ones, represent, digit, partition, addition, whole, part, identify, estimate, position, interval, multiple, placeholder, value, exchange, numerals, words, more, less, compare, greater than, less than, order, Roman numerals, round to nearest	Place value counters, base 10, bead strings, straws, numicon, digit cards, part whole models, number lines, tens frames, arrow cards
Addition and subtraction (3 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	
Small steps	Add and subtract 1s, 10s, 100s and 1,000s Add up to two 4-digit numbers – no exchange Add two 4-digit numbers – one exchange Add two 4-digit numbers – more than one exchange Subtract two 4-digit numbers – no exchange Subtract two 4-digit numbers – one exchange	Subtract two 4-digit numbers – more than one exchange Efficient subtraction Estimate answers Checking strategies
Vocabulary and resources	Addition, subtraction, number bonds, whole, part, mentally, calculation, increase, decrease, inverse, operation, multiple, exchange, estimate, check	Base 10, place value counters, double sided counters, number lines, part whole models, bar models, number cards

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Unit	Year 5	
Place value (4.5 weeks)	read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit read Roman numerals to 1,000 (M) and recognise years written in Roman numerals round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 solve number problems and practical problems that involve all of the above recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with 2 decimal places to the nearest whole number and to 1 decimal place read, write, order and compare numbers with up to 3 decimal places	
Small steps	Numbers to 10,000 Numbers to 100,000 Numbers to 1,000,000 Read and write numbers to 1,000,000 Powers of 10 10/100/1,000/10,000/100,000 more or less Partition numbers to 1,000,000 Number line to 1,000,000 Compare and order numbers to 100,000 Compare and order numbers to 1,000,000 Roman numerals to 1,000	Round to the nearest 10, 100 or 1,000 Round within 100,000 Round within 1,000,000 Decimal numbers up to 2 decimal places Thousandths as decimals Thousandths on a place value chart Order and compare decimals (same number of decimal places) Order and compare any decimals with up to 3 decimal places Round up to the nearest whole number Round to one decimal place
Vocabulary and resources	Roman numerals, number system, convert, million, hundred-thousand, ten-thousand, thousand, hundred, tens, ones, placeholder, multiple, powers of 10, more, less, partition, compare, order, round, 2/3 decimal places, tenths, hundredths, thousandths	Base 10, place value counters, place value charts, part-whole models, Gattegno charts
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	
Small steps	Mental strategies Add whole numbers with more than four digits Subtract whole numbers with more than four digits Round to check answers Inverse operations (addition and subtraction) Multi-step addition and subtraction problems Compare calculations Find missing numbers	Use known facts to add and subtract decimals within 1 Complements to 1 Add and subtract decimals across 1 Add decimals with the same number of decimal places Subtract decimals with the same number of decimal places Add decimals with different numbers of decimal places Subtract decimals with different numbers of decimal places Efficient strategies for adding and subtracting decimals
Vocabulary and resources	Mental, number bonds, place value, add, subtract, compensation, adjustment, column, rounding, exchange, calculation, estimate, inverse, approximate, decimal, place holder decimal place, efficient	Place value charts, place value counters, bar model, number line

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Unit	Year 6	
Place value (4.5 weeks)	read, write, order and compare numbers up to 10,000,000 and determine the value of each digit use negative numbers in context, and calculate intervals across 0 round any whole number to a required degree of accuracy solve number and practical problems that involve all of the above identify the value of each digit in numbers given to 3 decimal places	
Small steps	Numbers to 1,000,000 Numbers to 10,000,000 Read and write numbers to 10,000,000 Powers of 10 Number line to 10,000,000 Compare and order any integers	Round any integer Negative numbers Place value within 1 Place value-integers and decimals Round decimals
Vocabulary and resources	Ten-million, million, hundred-thousand, ten-thousand, thousand, hundred, tens, ones, placeholder, multiple, powers of 10, more, less, partition, compare, order, round, integer, 2/3 decimal places, tenths, hundredths, thousandths	Base 10, place value counters, place value charts, part-whole models, Gattegno charts
Addition and subtraction (2 weeks)	perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the 4 operations use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Small steps	Mental calculations and estimation Add and subtract integers Add and subtract decimals Solve multi-step problems Reason from known facts	
Vocabulary and resources	Mental, number bonds, place value, add, subtract, compensation, adjustment, column, rounding, exchange, calculation, estimate, inverse, approximate, integer, decimal, place holder	Place value charts, place value counters, bar model, number line