

Whole School Progression Map - Maths Curriculum at Brookfield

Place Value						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Count	- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - count numbers to 100 in numerals; count in multiples of twos, fives and tens	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	- count in multiples of 6, 7, 9, 25 and 1000 - count backwards through zero to include negative numbers	- count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 - count forwards and backwards with positive and negative whole numbers, including through zero	
Place Value: Represent	- identify and represent numbers using objects and pictorial representations - read and write numbers to 100 in numerals - read and write numbers from 1 to 20 in numerals and words	- read and write numbers to at least 100 in numerals and in words - identify, represent and estimate numbers using different representations, including the number line	- identify, represent and estimate numbers using different representations - read and write numbers up to 1000 in numerals and in words	- identify, represent and estimate numbers using different representations - 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	- read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit - read Roman numerals to 1000 (M) and recognise years written in Roman numerals	read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit

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Place Value: Use and Compare	given a number, identify one more and one less	- recognise the place value of each digit in a two-digit number (tens, ones) - compare and order numbers from 0 up to 100; use and = signs	- recognise the place value of each digit in a three-digit number (hundreds, tens, ones) - compare and order numbers up to 1000	- find 1000 more or less than a given number - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) - order and compare numbers beyond 1000	(read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit	(read, write), order and compare numbers up to 10 000 000 and determine the value of each digit
Place Value: Problems/Rounding		use place value and number facts to solve problems	solve number problems and practical problems involving these ideas	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	- interpret negative numbers in context - 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	- 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

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Addition and Subtraction						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction: Calculations	add and subtract one-digit and twodigit numbers to 20, including zero	- 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 ➤ adding three onedigit numbers	- 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	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	- 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	- perform mental calculations, including with mixed operations and large numbers - use their knowledge of the order of operations to carry out calculations involving the four operations

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Addition and Subtraction: Problems	• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = _ - 9$	• solve problems 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	• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	• 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 and a combination of these, including understanding the meaning of the equals sign	• solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why
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Multiplication and Division						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication and Division: Recall/Use		- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers - show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	- 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; multiplying together three numbers - recognise and use factor pairs and commutativity in mental calculations	- 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 - establish whether a number up to 100 is prime and recall prime numbers up to 19 - recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	- identify common factors, common multiples and prime numbers - use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

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Multiplication and Division: Calculations		calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals ($=$) signs	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	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	- 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 - multiply and divide numbers mentally drawing upon known facts - 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 whole numbers and those involving decimals by 10, 100 and 1000	- 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,
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