Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School
Maths curriculum overview

Number: Number and Place Value

COUNTING					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.	Count to and across 200, forwards and backwards, beginning with 0 or 1, or from any given number.	Count to and across 1000, forwards and backwards, beginning with 0 or 1, or from any given number.	Count backwards through 0 to include negative numbers.	Interpret negative numbers in context, count forwards and backwards with positive and negative numbers, including through 0.	Use negative numbers in context, and calculate intervals across 0.
Count, read and write numbers to 100 in numerals; count in 2's, 5's and 10's.	Count in steps of 2, 3 and 5 from 0 and in 10's from any number, forwards and backwards.	Count from 0 in multiples of 4, 8, 50 and 100.	Count from 0 in multiples of 6, 7, 9, 25 and 1000.	Count forwards and backwards in steps of powers of 10 for any given numbers up to 1,000,000. →	
Given a numbers, identify 1 more and 1 less.	Given a number, find 1/10more and 1/10 less to 100 and beyond.	Find 10 /100 more or less than a given number.	Find 1000 more or less than a given number.	Find 10,000/100,000 more or less than a given number. Find a 10^{th} or 100^{th} more or less than a given number.	Find 100,000 more or less than a given number. Find a 10^{th}, 100^{th} or 1000^{th} more or less than a given number.
COMPARING NUMBERS					
Use the language of: equal to, more than, less than (fewer), most, least.	Compare and order numbers from o up to 100; use <, > and = signs.	Compare and order numbers up to 1000.	Compare and order numbers beyond 1000. Compare numbers with the same number of decimal places, up to 2dp.	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.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Identify and represent numbers using objects and pictorial representations, including the number line.	Identify, represent and estimate numbers using different representations, including the number line.	Identify, represent and estimate numbers using different representations.	Identify, represent and estimate numbers using different representations.	Identify, represent and estimate numbers using different representations.	Identify, represent and estimate numbers using different representations.

READING AND WRITING NUMBERS (including Roman Numerals)

Read and write numbers from 0 to 20 in numerals and words.	Read and write numbers from 0 to 100 in numerals and words.	Read and write numbers up to 1000 in numerals and in words.	Read and write numbers beyond 10,000 in numerals and words.	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.
		Tell and write the time from an analogue clock, including using Roman Numerals from XII, and 12-hour and 24-hour clocks.	Read Roman Numerals to 100 (I and C) and know that over time, the numeral system changed to include the concept of 0 and place value.	Read Roman Numerlas to 1000 (M) and recognise years written in Roman Numerals. →	

UNDERSTANDING PLACE VALUE

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Begin to recognise the place value of each digit in a 2-digit number.	Recognise the place value of each digit in a 2-digit number (10's and units). Recognise 0 as a place holder.	Recognise the place value of each digit in a 3-digit number (100's, 10's and units).	Recognise the place value of each digit in a 4-digit number (1000's, 100's, 10's and units).	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 to at least 10,000,000 and determine the value of each digit.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

		Recognise 0 as a place holder.	Recognise 0 as a place holder.		
			Find the effect of dividing 1 or 2-digit numbers by 10 and 100, identifying the value of the digits in the answer as units, 10ths and 100ths.	Recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.	Identify the value of each digit to 3dp and multiply and divide numbers by 10, 100 and 1000 where the answers are up to 3dp.
ROUNDING					
	Round a number to the nearest 10.	Round any number to the nearest 10 or 100.	Round a number to the nearest 10, 100 or 1000.	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.	Round any whole number to a required degree of accuracy.
		Round money to the nearest 10p or £1.00.	Round decimals with 1dp to the nearest whole number.	Round decimals with 2dp to the nearest whole number and to 1dp.	Solve problems which require answers to be rounded to specified degrees of accuracy.
PROBLEM SOLVING					
Use number facts to solve simple and practical problems.	Use place value and number facts to solve practical and number problems.	Solve number problems and practical problems involving these ideas.	Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	Solve number problems and practical problems that involve all of the above.	Solve number problems and practical problems that involve all of the above.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Number: Addition and Subtraction

NUMBER BONDS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Represent and use number bonds and related subtraction facts, within 20.	Recall and use addition subtraction facts to 20 fluently and derive and use related facts up to 100.	Recall and use addition subtraction facts to 100 fluently and derive and use related facts up to 1000.	Recall and use addition subtraction facts to 1000 fluently and derive and use related facts up to 10,000.	Recall and use addition subtraction facts to 10,000 fluently and derive and use related facts up to 100,000.	Recall and use addition subtraction facts to 100,000 fluently and derive and use related facts up to 1,000,000.
MENTAL CALCULATION					
Add and subtract 1-digti and 2-digit numbers to 20, including 0.	Add and subtract numbers using concrete objects, pictorial representations and mentally, including: • a 2-digit numbers and units. • a 2-digit number and 10's. • two 2-digit numbers. • Adding three 1-digit numbers.	Add and subtract numbers mentally, including: • a 3-digit numbers and units. • a 3-digit number and 10's. • a 3-digit number and 100's.	Add and subtract numbers mentally, including: • a 4-digit numbers and units. • a 4-digit number and 10's. • a 4-digit number and 100's. • a 4-digit number and 1000's.	Add and subtract numbers mentally with increasingly large numbers.	Perform mental calculations, including with mixed operations and large numbers.
Read, write and interpret mathematical statements involving addition (+) subtraction (-) and equals (=) signs.	Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	Find corresponding +/- facts or a number sentence for 3-digit numbers, eg. 125 + 132 = 157 132 + 125 = 157 157 – 132 = 125 157 – 125 = 132	Find corresponding +/- facts or a number sentence for 4-digit numbers, eg. 1125 + 1132 = 1157 1132 + 1125 = 1157 1157 – 1132 = 1125 1157 – 1125 = 1132	Find corresponding +/- facts or a number sentence for increasingly large numbers, involving the four operations. Begin to use bodmas rules.	Use their knowledge of the order of operations to carry out calculations involving the four operations. Use basic bodmas rules.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

WRITTEN METHODS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	Add and subtract numbers up to 2-digits, using formal written methods of addition and subtraction.	Add and subtract numbers up to 3-digits, using formal written methods of columnar addition and subtraction.	Add and subtract numbers 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), including decimals.	Add and subtract increasingly large numbers, using formal written methods (columnar addition and subtraction), including decimals.
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					
Find an unknown numbers for +/- problems, eg. 12 + ? = 15	Recognise and use the inverse relationship between addition and subtraction and use this to check answers and solve missing number problems.	Estimate the answer to a calculation and use inverse operations to check answers.	Estimate and use inverse operations to check answers to a calculation.	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
PROBLEM SOLVING					
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, including money and measures: • using concrete objects and pictorial representations, including those involving numbers, quantities and measures.	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 addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

	• Applying their increasing knowledge of mental and written methods.	Solve problems involving all addition, subtraction, multiplication and division.	Solve problems involving all addition, subtraction, multiplication and division.	Solve problems involving all addition, subtraction, multiplication and division.	Solve problems involving all addition, subtraction, multiplication and division.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School
Maths curriculum overview

Newfield Park Primary School

Number: Multiplication and Division

MULTIPLICATION AND DIVISION FACTS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Count in multiples of 2's, 5's and 10's.	Count in multiples of 2, 3 and 5, from 0, and in 10's from any number, forwards or backwards.	Count from 0 in multiples of 4, 8, 50 and 100.	Count in multiples of 6, 7, 9, 25 and 1000, including decimals to 1dp and negative numbers.	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000, including decimals and negative numbers.	Count forwards or backwards in multiples all multiples up to 12, and in steps of 25, 1000 and powers of 10, including decimals and negative numbers.
Recognise odd and even numbers to 20.	Recall and use multiplication and division facts for the 2, 5 and 10 x tables, including recognising odd and even numbers.	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	Recall multiplication and division facts for multiplication tables for up to 12 x 12.	Recall multiplication and division facts for multiplication tables for up to 12 x 12.	Recall multiplication and division facts for multiplication tables for up to 12 x 12.
MENTAL CALCULATION					
Use 2, 5 and 10 x facts mentally. Begin to calculate facts for 2x, 5x and 10x tables, using repeated addition.	Use facts for 2, 3, 5 and 10 x tables to calculate mentally and begin to apply in written methods. Calculate facts for 2x, 3x, 5x and 10x tables, using repeated addition.	Write and calculate mathematical statements for multiplication and division, using the times tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.	Use place value, know and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers.	Multiply and divide numbers mentally drawing upon known facts.	Perform mental calculations, including with mixed operation and large numbers.
	Show that multiplication of 2 numbers can be done in any order (commutative)	Recognise factor pairs and use commutativity to calculate mentally.	Recognise and use factor pairs and commutativity in mental calculations.	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	Associate a fraction with division and calculate decimal fraction equivalents, eg. 0.375 = 3/8

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

	and that division of one number by another cannot.				
WRITTEN CALCULATION					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Calculate multiplication statements 2 x, 5 x and 10 x tables by using arrays and grouping. Calculate division statements for 2 x, 5 x and 10 x tables, using sharing. Begin to understand x as repeated + and ÷ as repeated subtraction.	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs. Understand x as repeated addition and ÷ as repeated subtraction.	Write and calculate mathematical statements for multiplication and division using multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.	Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout.	Multiply numbers up to 4-digits by a 1 or 2-digit number using a formal written method, including long multiplication for 2-digit numbers.	Multiply multi-digit numbers up to 4-digits by a 2-digit whole number using the formal written method of long multiplication.
Use practical grouping and sharing to multiply and divide.	Use jottings to support sharing and grouping to work out multiplication and division problems. Use a number line to count on to multiply and count back to divide.	Divide numbers up to 2-digits by 1-digit, using a number line to count on to multiply and count back to divide. Use grid-method to multiply a 2-digit number by a 1-digit number. Divide numbers with remainders.	Divide numbers up to 3-digits by 1-digit, using a number line to count on to multiply and count back to divide. Use grid method to multiply a 4-digit number by a 1-digit number and a 3-digit number by a 2-digit number. Use chunking to divide 3 and 4 digit numbers by a 1 digit number and a 3-digit number by a 2-digit number. Divide numbers with remainders.	Divide numbers up to 4-digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context. Divide numbers with remainders. Round answers as appropriate.	Divide numbers up to 4-digits by a 2-digit whole number using the formal written method of short division; where appropriate for the context divide numbers up to 4-digits by a 2-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.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

				Use written division methods in cases where the answer has up to 1dp.	Use written division methods in cases where the answer has up to 2dp.
PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Begin to be aware of numbers that can be divided by 2, 5 and 10.	Be aware of numbers that can be divided by 2, 3, 5 and 10.	Be aware of numbers that can be divided by 3, 4, 8, 50 and 100 and begin to recognise and use factor pairs and use commuativity in mental calculations. Begin to use the language of 'factor.'	Recognise and use factor pairs and use commutativity in mental calculations.	Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 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.	Identify common factors, common multiples and prime numbers. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
		Introduce square numbers visually.	Recognise square numbers for times tables up to 12 x 12, as a number multiplied by itself.	Recognise and use square numbers and cube numbers , and the notation for squared ^{2} and cubed ^{3}.	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3, m^3, and extending to other units, such as $mm^3$and km^3
ORDER OF OPERATIONS					
				Begin to understand the concept of bodmas and the order in which	Use their knowledge of the order of operations to carry out calculations

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

				calculations should be done.	involving the four operations.
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Introduce estimation. Use inverse operations to check answers.	Estimate the answer to a calculation and use inverse operations to check answers.	Estimate and use inverse operations to check answers to a calculation.	Use the estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use the estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
PROBLEM SOLVING					
Solve 1-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	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.	Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1-digit numbers, integer scaling problems and harder correspondence problems such as 'n' objects are connected to 'm' objects. Create own problems involving multiplication and division.	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.	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 the ratio and proportion of similar shapes, where the scale factor is known or can be found.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Newfield Park Primary School

				Create own problems involving multiplication and division.	Create own problems involving multiplication and division.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Number: Fractions, Decimals and Percentages

COUNTING IN FRACTIONAL STEPS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Count in fractions up to 10, starting from any number and using the ½ and 2/4 equivalence on the number line.	Count up and down in 10ths.	Count up and down in 100ths.	Count up and down in 1000ths.	Count up and down in a range of fraction denominations.
RECOGNISING FRACTIONS					
Recognise, find and name ½ as 1 of 2 equal parts of an object, shape or quantity.	Recognise, find, name and write fractions ⅓, ¼, 2/4, and ¾ of a length, shape, set of objects or quantity.	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	Recognise that 100ths arise when dividing an object by 1 hundred and dividing 10ths by 10.	Recognise and use 1000ths and relate them to 10ths, 100ths and decimals equivalents.	Recognise and use 1000ths and relate them to 10ths, 100ths and decimals equivalents.
Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.		Recognise that 10ths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers of quantities by 10.	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.		
		Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.			
COMPARING FRACTIONS					
Compare half and whole.	Compare and order halves, thirds and quarters.	Compare and order unit fractions, and fractions with the same denominators.	Compare and order unit fractions, and fractions with the same denominators.	Compare and order fractions whose denominators are all	Compare and order fractions, including fractions >1.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

				multiples of the same number.	
COMPARING DECIMALS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Compare numbers with up to 1dp in a money context.	Compare numbers with up to 2dp in a money context.	Compare numbers with the same number of decimal places up to 2dp.	Read, write, order and compare numbers with up to 3dp.	Identify the value of each digit in numbers given to 3dp.
ROUNDING INCLUDING DECIMALS					
			Round decimals with 1dp to the nearest whole number.	Round decimals with 2dp to the nearest whole number and to 1dp.	Solve problems which require answers to be rounded to specified degrees of accuracy.
EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES)					
Recognise what half of an even number up to 10 is.	Write simple fractions eg. ½ of 6 = 3 and recognise the equivalence of 2/4 and ½.	Recognise and show, using diagrams, equivalent fractions with small denominators.	Recognise and show, using diagrams, families of common equivalent fractions.	Identify, name and write equivalent fractions of a given fraction, represented visually, including 10ths and 100ths.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
	Recognise decimals in a money context.	Recognise decimals in a money context.	Recognise and write decimal equivalents of any number of 10ths and 100ths.	Read and write decimal numbers as fractions (eg. 0.71 = 71/100). Recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.	Associate a fraction with division and calculate decimal fraction equivalents (3g. 0.375) for a simple fraction (eg. 3/8).
			Recognise and write decimal equivalents to ¼, ½ and ¾.	Recognise the percent symbol % and understand that percent relates to 'number of	Recall and use equivalences between simple fractions, decimals and

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

				parts per 100,' and write percentages as a fraction with denominator 100 as a decimal fraction.	percentages, including in different contexts.
ADDITION AND SUBTRACTION OF FRACTIONS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Recognise that 2 halves make a whole, 4 quarters make a whole and ½ + ¼ = ¾ when using visual models.	Add and subtract fractions with the same denominator within one whole, eg. 5/7 + 1/7 = 6/7.	Add and subtract fractions with the same denominator.	Add and subtract fractions with the same denominator and multiples of the same number. Recognise mixed numbers and improper fractions and convert from one from to the other and write mathematical statements >1 as a mixed number eg. ⅕+ ⅕= 6/5 = 1 ⅕	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
MULTIPLICATION AND DIVISION OF FRACTIONS					
				Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	Multiply simple pairs of proper fractions, writing the answer in its simplest form, eg. ¼ x ½ = ⅛ Multiply 1-digit numbers with up to 2dp by whole numbers. Divide proper fractions by whole numbers, eg. ⅓ ÷ 2 = ⅙

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

MULTIPLICATION AND DIVISION OF DECIMALS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Multiply 1-digit numbers with up to 1dp by whole numbers.	Multiply 1-digit numbers with up to 2dp by whole numbers.
		Find the effect of dividing a 1 or 2-digit number by 10 and identifying the value of the digits in the answer as 1s, 10ths, and 100ths.	Find the effect of dividing a 1 or 2-digit number by 10 and 100 and identifying the value of the digits in the answer as 1s, 10ths, and 100ths.	Find and explain the effect of dividing a 1 or 2-digit number by 10 and 100 and identifying the value of the digits in the answer as 1s, 10ths, and 100ths.	Multiply and divide numbers by 10, 100 and 1000, where the answers are up to 3dp.
			In a money context, identify the value of each digit to 1dp and multiply and divide numbers by 10, 100 and where the answers are up to 1dp.	In a money context, identify the value of each digit to 2dp and multiply and divide numbers by 10, 100 and where the answers are up to 2dp.	Identify the value of each digit to 3dp and multiply and divide numbers by 10, 100 and 1000 where the answers are up to 3dp.
				Begin to associate a fraction with division and calculate decimal fraction equivalents eg. 0.375 for a simple fraction is 3/8.	Associate a fraction with division and calculate decimal fraction equivalents eg. 0.375 for a simple fraction is 3/8.
				Use written division methods on cases where the answer has up to 1dp.	Use written division methods on cases where the answer has up to 2dp.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

PROBLEM SOLVING					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Solve practical problems that involve finding ½ and ¼.	Solve problems that involve ½ and ⅓ and ¼.	Solve problems that involve all of the above.	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 problems involving numbers up to 3dp.	Solve problems involving numbers up to 3dp.
		Solve money problems involving numbers to 2dp.	Solve simple measure and money problems involving fractions and decimals to 2dp.	Solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those with a denominator of a multiple of 10 or 25.	Solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those with a denominator of a multiple of 10 or 25.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Ratio and Proportion

Statements only appear in Year 6 but should be connected to previous learning, particularly fractions and multiplication and division					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					Solve problems involving the relative sizes of two quantities where values can be found by using integer multiplication and division facts.
					Solve problems involving the calculation of percentages, including measures.
					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.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Algebra

EQUATIONS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and *missing number problems* such as 7 = ◯ - 9	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and *missing number problems*.	Solve missing number problems, including *missing number* problems, place value, and more complex addition and subtraction.	Solve missing number problems, including *missing number* problems, place value, and more complex addition and subtraction.	Use the properties of rectangles to deduce related facts and find *missing lengths and angles*.	Express missing number problems algebraically, eg. 65 = 13x
		Solve problems, including *missing number* problems, involving multiplication and division, including integer scaling.	Solve problems, including *missing number* problems, involving multiplication and division, including integer scaling.		
Recall and use addition and subtraction facts to 10 fluently, and derive and use related facts up to 20.	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.	Recall and use addition and subtraction facts to 100 fluently, and derive and use related facts up to 1000 eg. 23 + 77 = 100, so 230 + 770 = 1000	Recall and use addition and subtraction facts to 1000 fluently, and derive and use related facts up to 10,000 eg. 230 + 770 = 1000, so 2300 + 7700 = 10,000	Recall and use addition and subtraction facts to 1000 fluently, and derive and use related facts up to 10,000.	Find pairs of numbers that satisfy number sentences involving 2 unknowns, eg. x + y = 25
Represent and use number bonds and related subtraction facts within 20.	Represent and use number bonds and related subtraction facts within 100.	Represent and use number bonds and related subtraction facts within 100.	Represent and use number bonds and related subtraction facts with increasingly larger numbers.	Represent and use number bonds and related subtraction facts with increasingly larger numbers.	Enumerate all possibilities of combinations of 2 variables.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

FORMULAE					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit, eg. m or cm.	Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit, eg. m or cm.	Use simple formulae. Recognise when it is possible to use formulae for area and volume of shapes.
SEQUENCES					
Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. Order and arrange combinations of mathematical objects in patterns. Describe and continue a pattern of mathematical objects.	Compare and sequence intervals of time. Order and arrange combinations of mathematical objects in patterns. Describe and continue a pattern of mathematical objects.	Compare and sequence intervals of time and measurements. Order and arrange combinations of mathematical objects in patterns, including rotations and reflections. Describe and continue a pattern of mathematical objects.	Compare and sequence mixed units of measurement, eg. cm and m. Order and arrange combinations of mathematical objects in patterns, including rotations and reflections. Describe and continue a pattern of mathematical objects.	Generate and describe numbers sequences of different multiples, including measures, decimal notation and mixed measures, eg. g and kg.	Generate and describe linear number sequences.

Measurement

COMPARING AND ESTIMATING					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Compare, describe and solve practical problems for: • lengths and heights, eg. long/short, longer/shorter, tall/short, double/half • mass/weight eg. heavy/light, heavier than, lighter than • capacity and volume, eg. full/empty, more than, less than, half full, quarter • time eg. quicker, slower, earlier, later	Compare and order lengths, mass, volume/capacity and record the results using <> and = Estimate length, mass, volume and capacity.	Estimate, compare and calculate different measures, including money in pounds and pence.	Estimate, compare and calculate different measures, including money in pounds and pence.	Calculate and compare the area of squares and rectangles including standard units, square centimetres – cm^2 and square metres - m^2 and estimate the area of irregular shapes. Estimate volume using $1cm^3$ blocks to build cubes and cuboids and capacity.	Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed - cm^3 and cubic metres - m^3 and extending to other units such as mm^3 and km^3.
Sequence events in chronological order using language eg. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.	Compare and sequence intervals of time.	Compare durations of events, for example to calculate the time taken by particular events or tasks.	Compare durations of events, for example to calculate the time taken by particular events or tasks.	Compare durations of events, for example to calculate the time taken by particular events or tasks.	Compare durations of events, for example to calculate the time taken by particular events or tasks.
Estimate and read time with increasing accuracy to the nearest ¼ hour interval and use vocabulary such as minutes, hours, morning, afternoon and night.	Estimate and read time with increasing accuracy to the nearest 5 minute interval and use vocabulary such as minutes, hours, morning, afternoon and night.	Estimate and read time with increasing accuracy to the nearest minute: record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	Estimate and read time with increasing accuracy to the nearest minute: record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	Estimate and read time with increasing accuracy to the nearest minute: record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	Estimate and read time with increasing accuracy to the nearest minute: record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Newfield Park Primary School

MEASURING AND CALCULATING					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Measure and begin to record the following: • lengths and heights • mass/weight • capacity and volume • time (hours, minutes, seconds)	Choose and use appropriate standard units to estimate and measure length/height in any direction – m/cm; mass – g/kg; temperature ˚C; capacity – l/ml to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.	Measure, compare, add and subtract; lengths - m/cm/mm; mass – kg/g; volume/capacity – l/ml. Read scales with these units of measurement with increasing accuracy.	Estimate, compare and calculate different measures, including money in pounds and pence. Read scales with different units of measurement and intervals accurately.	Use all four operations to solve problems involving measure, eg. length, mass, volume, money, using decimal notation, including scaling. Convert units of measurement, eg. g to kg, cm to m, l to ml. Read scales with different units of measurement and intervals accurately.	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3dp where appropriate. Read scales with different units of measurement and intervals accurately.
	Measure the length of the sides/edges of 2-D or 3-D shapes.	Measure the perimeter of simple 2-D shapes.	Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m.	Measure and calculate the perimeter of composite rectilinear shapes in cm and m.	Recognise that shapes with the same areas can have different perimeters and vice versa.
		Find the area of rectilinear shapes by counting the squares.	Find the area of rectilinear shapes by counting the squares.	Calculate and compare the area of squares and rectangles including using standard units, squares centimetres, cm ^{2} and square metres m^2 and estimate the area of irregular shapes.	Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres, cm^3 and cubic metres, m^3 and extending to other units, eg, mm^3 and km^3. Recognise when it is

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

					possible to use formulae for area and volume of shapes.
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Recognise and know the value of different denominations of coins and notes.	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	Add and subtract amounts of money to give change, using both £ and p in practical contexts.	Add and subtract amounts of money to give change, using both £ and p in practical contexts.	Solve money problems in a real-life context.	Solve money problems in a real-life context, including credits and debits.
	Find different combinations of coins that equal the same amounts of money.			Convert money measures, eg. p to £ and vice versa.	Convert money measures, eg. p to £ and vice versa.
	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.				
TELLING THE TIME					
Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Tell and write the time to five minutes, including quarter past/to the hour and the number of hours in a day.	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.	Read, write and convert time between analogue and digital 12 and 24-hour clocks, including using Roman numerals.	Read, write and convert time between analogue and digital 12 and 24-hour clocks, including using Roman numerals.	Read, write and convert time between analogue and digital 12 and 24-hour clocks, including using Roman numerals.
Recognise and use language relating to dates, including days of the week, weeks, months and years.	Know the number of minutes in an hour, the number of hours in a day and the number of months in a year.	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Use language such as later, earlier when solving simple time problems.	Solve simple time problems in a real-life context.	Solve time problems in a real-life context.	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Solve problems involving converting between units of time.	Solve problems involving converting between units of time.
CONVERTING					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Know the days of the week, months of the year and seasons.	Know the number of minutes in an hour and the number of hours in a day.	Know the number of seconds in a minute and the number of days in each month, year and leap year.	Convert between different units of measure eg. kilometre to metre; hour to minute.	Convert between different units of measure eg. kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre.	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 up to 3dp.
		Read, write and convert time between analogue and digital on a 12 hour clock.	Read, write and convert time between analogue and digital, 12 hour and 24-hour clocks.	Solve problems involving converting between units of time.	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3dp where appropriate.
			Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Understand and use equivalences between metric units and common imperial units, such as inches, pounds and pints.	Convert between miles and kilometres.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School
Maths curriculum overview

Newfield Park Primary School

Geometry: Properties of Shapes

IDENTIFYING SHAPES AND THEIR PROPERTIES

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise and name common 2-D and 3-D shapes, including: • 2-D shapes eg. rectangles (including squares), circles and triangles. • 3-D shapes eg. cuboids (including cubes), pyramids and spheres.	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, eg. a circle on a cylinder and a triangle on a pyramid.	Identify horizontal, vertical and diagonal lines of symmetry in 2-D and 3-D shapes.	Identify lines of symmetry in 2-D shapes presented in different orientations.	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	Recognise, describe and build simple 3-D shapes, including making nets. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

DRAWING AND CONSTRUCTING

Make pictures and models, using 2-D and 3-D shapes, using appropriate language to describe them.	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.	Complete a simple symmetric figure with respect to the specific line of symmetry.	Draw given angles, and measure them in degrees.	Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets.
Compare and sort common 2-D and 3-D shapes and everyday objects.	Compare and sort common 2-D and 3-D shapes and everyday objects.	Compare and sort 2-D and 3-D shapes, including different types of triangles, based on	Compare and classify geometric shapes, including quadrilaterals and triangles, based on	Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles,

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

		their properties and sizes.	their properties and sizes.	based on reasoning about equal sides and angles.	quadrilaterals, and regular polygons.
ANGLES					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Recognise right angles in 2-D and 3-D shapes.	Recognise angles as a property of shape or a description of a turn.	Recognise angles as a property of shape or a description of a turn.	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.
		Identify right angles, recognise that 2 right angles make a half-turn, 3 make ¾ of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle.	Identify acute and obtuse angles and compare and order angles up to 2 right angles by size.	Identify: • angles at a point and one whole turn (360˚) • angles at a point on a straight line and ½ a turn (180˚) • other multiples of 90˚	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
	Begin to use the language of horizontal, vertical and parallel in the context of 2-D and 3-D shapes.	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Geometry: Position and Direction

POSITION, DIRECTION AND MOVEMENT					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Describe position, direction and movement, including half, quarter and three quarter turns.	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).	Use mathematical language to describe position, directions and movement, including turns and rotation. Describe and plot positions and co-ordinates on a 2-D grid in the first quadrant.	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.	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.	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.
			Plot specified points and draw sides to complete a given polygon.	Plot specified points and draw sides to complete a given polygon.	Use a compass to draw circles with different radius and diameters.
PATTERN					
Order and arrange combinations of mathematical objects in patterns and sequences.	Order and arrange combinations of mathematical objects in pattern and sequences.	Order and arrange combinations of mathematical objects in patterns and sequences. Describe and continue patterns and sequences.	Use patterns and sequences to predict the next step when solving a problem.	Find simple pattern s and sequences when solving problem s and use these to work out the next steps.	Find simple formulae when solving problems and use this to work out the next step and the nth step.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Statistics

INTERPRETING, CONSTRUCTING AND PRESENTING DATA					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
In a real-life context, interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	Interpret and present data using bar charts, pictograms and tables.	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and line graphs.	Complete, read and interpret information in tables, including timetables.	Interpret and construct pie charts and line graphs and use these to solve problems.
In a real-life context, answer simple questions by counting the number of objects in each category.	Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	Ask and answer questions by counting the number of objects in each category and sorting the categories by quantity.	Ask and answer questions by counting the number of objects in each category and sorting the categories by quantity.	Ask and answer questions by counting the number of objects in each category and sorting the categories by quantity.	Ask and answer questions by counting the number of objects in each category and sorting the categories by quantity.
	Interpret data where intervals increase by different multiples, eg. 2's	Interpret data where intervals increase by different multiples, eg. 2's, 5's, 10's	Interpret data where intervals increase by different multiples, eg. 2's, 3's, 4's	Interpret data where intervals increase in a variety of multiples.	Interpret data where intervals increase in a variety of multiples.
	Ask and answer questions about totalling and comparing categorical data.	Ask and answer questions about totalling and comparing categorical data.	Ask and answer questions about the data.	Ask and answer questions about the data.	Ask and answer questions about the data.
SOLVING PROBLEMS					
Answer simple questions about the data, eg. Which was the most popular? Which was the least popular? How many people voted? when using information shown in a pictogram, tally chart, block diagram or table.	Solve one-step and two-step questions, eg, How many more? How many fewer? when using information presented in scaled bar charts, pictograms and tables.	Solve one-step and two-step questions, eg, How many more? How many fewer? Using information presented in scaled bar charts, pictograms and tables.	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Solve comparison, sum and difference problems using information presented in a line graph.	Calculate and interpret the mean as an average.

Nurture
InsPire
ResPect
Succeed

Newfield Park Primary School

Maths curriculum overview

Newfield Park Primary School