Nyewood CE Infant School
Mathematics Progression in Knowledge and Skills

Curriculum Intent

*The **intent** of our curriculum is that it will secure our vision that at Nyewood Church of England Infant School our children are **confident, happy** and **independent learners** who take an active role **together in God's world**.*

Mathematics Intent

As Mathematicians, children at Nyewood Church of England Infant school will become confident, happy and resilient learners who are able to use number, shape and measures to answer questions and solve problems as members of God's world.

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Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Autumn Term		
Number	**Children know…** • Some number rhymes • Can recite numbers to 3 • Objects can be counted • That digits can be written and carry meaning, and read numbers to 3 **Children can…** • Have an understanding of numbers to 3. • Recall number bonds up to 3. • Begin to link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 3 • Begin to join in with some number rhymes and songs • Count objects, up to 3, which can be moved and those which cannot • Link the number symbol (numeral) with its cardinal number value, up to 3 • Explore different equipment/objects and match it to numerals to 3.	**Children know…** • Number rhymes • Can recite numbers to 5 • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 5 **Children can…** • Have an understanding of numbers to 5. • Subitise (begin to recognise quantities without counting) up to 3. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 3 (including subtraction facts). • Begin to link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 5 • Join in with number rhymes and songs • Count objects, up to 5, which can be moved and those which cannot • Link the number symbol (numeral) with its cardinal number value, up to 5 • Explore different equipment/objects and match it to numerals to 5.	**Children know…** • Number rhymes • Can recite numbers to 10 • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 10 **Children can…** • Have an understanding of numbers to 10. • Subitise (begin to recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts). • Begin to link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 10 • Join in and recall number rhymes and songs • Count objects, up to 10, which can be moved and those which cannot • Link the number symbol (numeral) with its cardinal number value, up to 10 • Explore different equipment/objects and match it to numerals to 10.
Key Vocabulary	Number, number names, digit, numeral, count, match, number bonds, subitise, symbol, addition, subtraction, value		

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Number Patterns	**Children know…** • Order of numbers to 3 • Meaning of odd/even **Children can…** • Verbally count to 3, recognising the pattern of the counting system. • Explore and represent patterns within numbers up to 3, including evens and odds.	**Children know…** • Order of numbers to 5 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count beyond 5, recognising the pattern of the counting system. • Compare quantities up to 3 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 3, including evens and odds, double facts and how quantities can be distributed equally.	**Children know…** • Order of numbers to 10 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count beyond 10, recognising the pattern of the counting system. • Compare quantities up to 5 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 5, including evens and odds, double facts and how quantities can be distributed equally.
Key vocabulary	Order, odd, even, patterns, greater than, less than, same as, distributed, shared, equally, double, compare		
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Spring Term		
Number	**Children know…** • Can recite numbers to 5 • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 5 • Mathematical symbols such as +, -, = for number bonds and related subtraction facts **Children can…** • Have an understanding of numbers to 5. • Subitise (begin to recognise quantities without counting) up to 3. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 3 (including subtraction facts). • Begin to link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 5	**Children know…** • Can recite numbers to 10 • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 10 • Mathematical symbols such as +, -, = for number bonds and related subtraction facts **Children can…** • Have an understanding of numbers to 10. • Subitise (begin to recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts). • Begin to link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 10	**Children know…** • Can recite numbers to 10 and beyond • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 10 and beyond • Mathematical symbols such as +, -, = for number bonds and related subtraction facts **Children can…** • Have an understanding of numbers to 10 and beyond. • Subitise (begin to recognise quantities without counting) up to 5 and beyond. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Begin to link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 10 and beyond

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Key vocabulary	*Number, number names, digit, numeral, count, match, number bonds, subitise, symbol, addition, subtraction, value, double, plus, minus, add, take away*		
Number Patterns	**Children know…** • Order of numbers to 5 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count beyond 5, recognising the pattern of the counting system. • Compare quantities up to 3 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 3, including evens and odds, double facts and how quantities can be distributed equally.	**Children know…** • Order of numbers to 10 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count beyond 10, recognising the pattern of the counting system. • Compare quantities up to 5 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 5, including evens and odds, double facts and how quantities can be distributed equally.	**Children know…** • Order of numbers to 20 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.
Key vocabulary	*Order, odd, even, patterns, greater than, less than, same as, distributed, shared, equally, double, compare*		
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Summer Term		
Number	**Children know…** • Can recite numbers to 5 and beyond • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 5 and beyond • Mathematical symbols such as +, -, = for number bonds and related subtraction facts **Children can…** • *Have a deep understanding of numbers to 5, including the composition of each number.* • Subitise (recognise quantities without counting) up to 3.	**Children know…** • Can recite numbers to 10 and beyond • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 10 and beyond • Mathematical symbols such as +, -, = for number bonds and related subtraction facts **Children can…** • Have a deep understanding of numbers to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	**Children know…** • Can recite numbers to 20 and beyond • Objects can be counted in any order • That digits can be written and carry meaning, and read numbers to 20 and beyond • Mathematical symbols such as +, -, = for number bonds and related subtraction facts **Children can…** • Have a deep understanding of numbers to 20, including the composition of each number. • Subitise (recognise quantities without counting) up to 10. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 10 (including subtraction facts), including double and half facts.

	• Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts). • Link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 5 • Record their findings, using pictures/equipment/ICT programmes/number sentences etc.	• Link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 10 • Record their findings, using pictures/equipment/ICT programmes/number sentences etc.	• Link the number symbol (numeral) with its cardinal number value using equipment/objects, up to 10 and beyond • Record their findings, using pictures/equipment/ICT programmes/number sentences etc.
Key vocabulary	*Number, number names, digit, numeral, count, match, number bonds, subitise, symbol, addition, subtraction, value, double, plus, minus, add, take away, record, number sentences*		
Number patterns	**Children know…** • Order of numbers to 10 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count beyond 10, recognising the pattern of the counting system. • Compare quantities up to 5 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 5, including evens and odds, double facts and how quantities can be distributed equally. • Be able to record their mathematical finds, and solve their own problems.	**Children know…** • Order of numbers to 20 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. • Be able to record their mathematical finds, and solve their own problems.	**Children know…** • Order of numbers to 100 • Meaning of greater than, less than, same as • Meaning of odd/even, doubles, distributed/shared equally **Children can…** • Verbally count to 100, recognising the pattern of the counting system. • Compare quantities up to 20 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 20, including evens and odds, double facts and how quantities can be distributed equally. • Be able to record their mathematical finds, and solve their own problems.
Key Vocabulary	*Order, odd, even, patterns, greater than, less than, same as, distributed, shared, equally, double, compare, mathematical problems, record*		
Extra vocabulary	*Long/er, short/er, position, direction, money, coin, sequence, sort, clock, triangle, square, rectangle, circle*		

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Year 1			
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Autumn Term		
Number and Place Value	**Children know…** • Number names to 20 • How to write digits 0-9 • Read numerals to 20 • Language of place value, more, less, same as **Children can…** • Count to and across 20, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 20 in numerals • Given a number, identify one more and one less to 20 • Identify and represent numbers using objects and pictorial representations including the number line to 20 • Read and write numbers from 1 to 5 in numerals and words.	**Children know…** • Number names to 50 • How to write digits 0-9 • Read numbers to 50 • Language of place value, more, less, same as **Children can…** • Count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 50 in numerals • Given a number, identify one more and one less to 50 • Identify and represent numbers using objects and pictorial representations including the number line to 50 • Read and write numbers from 1 to 10 in numerals and words.	**Children know…** • Number names to 100 • How to write digits 0-9 • Read numbers to 100 • Language of place value, more, less, same as **Children can…** • Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 100 in numerals • Given a number, identify one more and one less to 100 • Identify and represent numbers using objects and pictorial representations including the number line to 100 and beyond • Read and write numbers from 1 to 20 in numerals and words.
Key Vocabulary	Number, numeral, digits, number words, place value, more, less, same as, count, forwards, backwards, count		
Addition and Subtraction	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction **Children can…** • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs to 10 • Represent and use number bonds and related subtraction facts of and within 5 • Add and subtract one-digit numbers to 10, including zero • Solve one-step problems that involve addition and subtraction to 10, using concrete objects and pictorial representations	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction **Children can…** • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs to 20 • Represent and use number bonds and related subtraction facts of and within 10 • Add and subtract one-digit numbers to 20, including zero • Solve one-step problems that involve addition and subtraction to 20, using concrete objects and pictorial representations.	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction **Children can…** • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs to 20 and beyond • Represent and use number bonds and related subtraction facts of and within 20 • Add and subtract one-digit and two-digit numbers to 20 and beyond, including zero • Solve one-step problems that involve addition and subtraction to 20 and beyond, using concrete objects and pictorial representations.

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Key Vocabulary	Mathematical statements, addition, subtraction, equals, add, subtract, same as, plus, minus, more, less, fewer, greater, number bonds, inverse, digit, number sentence		
Measurement	**Children know…** • Language – quicker, slower, minutes, seconds, before, after, next, first, hour • Days of the week • Long and short hands on a clock tell different parts of time • Coins represent values **Children can…** • Compare, describe and solve practical problems for time [quicker, slower] • Measure and begin to record time (minutes and seconds) • Sequence 3 events in chronological order using language [before and after, next, first] • Recognise and use language relating to dates, including days of the week • Tell the time to the hour and draw the hands on a clock face to show these times. • Recognise different denominations of coins (all coins)	**Children know…** • Language – quicker, slower, earlier, later, hours, minutes, seconds, before, after, next, first, today, yesterday, tomorrow, morning, afternoon, evening, hour, half past • Days of the week, months, years • Long and short hands on a clock tell different parts of time • Coins and notes represent values **Children can…** • Compare, describe and solve practical problems for time [quicker, slower, earlier, later] • Measure and begin to record time (hours, minutes, seconds) • Sequence events in chronological order using language [before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • Recognise and use language relating to dates, including days of the week, 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. • Recognise and know the value of different denominations of coins and notes (all coins and all notes)	**Children know…** • Language – quicker, slower, earlier, later, days, hours, minutes, seconds, before, after, next, first, today, yesterday, tomorrow, morning, afternoon, evening, hour, half past, quarter past, quarter to • Days of the week, months, years • Long and short hands on a clock tell different parts of time • Coins and notes represent and can make values **Children can…** • Compare, describe and solve a range of practical problems for time [quicker, slower, earlier, later] • Measure and begin to record time (days, hours, minutes, seconds) • Sequence several events in chronological order using language [before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • Recognise and use a range of language relating to dates, including days of the week, months and years • Tell the time to the hour, half past and quarter to and past the hour and draw the hands on a clock face to show these times. • Recognise and know the value of different denominations of coins and notes (all coins and all notes) and apply this in context (e.g. place value of coins; adding coins/amounts)
Key Vocabulary	Days, months, years, hours, minutes, seconds, coins, pounds, pence, notes, change, quicker, slower, earlier, later, before, after, next, first, today, yesterday, tomorrow, morning, afternoon, evening, sequence, measure, record, chronological order, hour hand, minute hand, clock, hour, half past, quarter past, quarter to		
Geometry	**Children know…** • 2-D shapes names – circle and triangle • 3D shape names – cube and cuboid **Children can…** • Recognise and name common 2-D shapes – circles and triangles • Recognise and name common 3-D shapes – cubes and cuboids	**Children know…** • 2-D shapes names – rectangle, square, circle and triangle • 3-D shapes names - cuboid, cube, pyramid, sphere **Children can…** • Recognise and name common 2-D shapes - rectangles (including squares), circles and triangles	**Children know…** • 2-D shapes names – rectangles, squares, circles, triangles, pentagons, hexagons • 3-D shapes names – cuboids, cubes, pyramids, spheres, cones and cylinders **Children can…** • Recognise and name common 2-D shapes - rectangles (including squares), circles, triangles, pentagons, hexagons

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		• Recognise and name common 3-D shapes - cuboids (including cubes), pyramids and spheres	• Recognise and name common 3-D shapes - cuboids (including cubes), pyramids, spheres, cones and cylinders
Key Vocabulary	2D, 3D, shape, rectangles, squares, circles, triangles, pentagons, hexagons, cuboids, cubes, pyramids, spheres, cones and cylinders		
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Spring Term		
Number and Place Value	**Children know…** • Can recite numbers to and from 50 • How to write digits 0-9 • Read numbers to 50 **Children can…** • Count in multiples of twos and tens to 50 • Count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 50 in numerals • Given a number, identify one more and one less to 50 • Identify and represent numbers to 50 using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), • Read and write numbers from 1 to 10 in numerals and words.	**Children know…** • Can recite numbers to and from 100 • How to write digits 0-9 • Read numbers to 100 **Children can…** • Count in multiples of twos, fives and tens to 100 • Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 100 in numerals • Given a number, identify one more and one less to 100 • Identify and represent numbers to 100 using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • Read and write numbers from 1 to 20 in numerals and words.	**Children know…** • Can recite numbers to and beyond 100 • How to write digits 0-9 • Read numbers to and beyond 100 **Children can…** • Count in multiples of twos, fives and tens to 100 and beyond • Count to and across and beyond 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 100 and beyond in numerals • Given a number, identify one more and one less to and beyond 100 • Identify and represent numbers to 100 and beyond using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • Read and write numbers from 1 to 20 and beyond in numerals and words.
Key Vocabulary	Count, numbers, numeral, digit, number words, forwards, backwards, more, less, fewer, same as, equals, equal to, number line, twos, fives, tens, most, least		
Addition and Subtraction	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction • Addition and subtraction are inverses to help solve missing numbers **Children can…** • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs to 20	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction • Addition and subtraction are inverses to help solve missing numbers **Children can…** • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs to 20	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction • Addition and subtraction are inverses to help solve missing numbers **Children can…** • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs to 50

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	• Represent and use number bonds and related subtraction facts of and within 10 • Add and subtract one-digit numbers to 20, including zero • Solve one-step problems that involve addition and subtraction to 10, using concrete objects and pictorial representations, and missing number problems such as $\Delta - 2 = 8$.	• Represent and use number bonds and related subtraction facts of and within 20 • Add and subtract one-digit and two-digit numbers to 20, including zero • Solve one-step problems that involve addition and subtraction to 20, using concrete objects and pictorial representations, and missing number problems such as $7 = \Delta - 9$.	• Represent and use number bonds and related subtraction facts of and within 20 and beyond • Add and subtract one-digit and two-digit numbers to 50, including zero • Solve one-step problems that involve addition and subtraction to 50, using concrete objects and pictorial representations, and missing number problems such as $25 = \Delta - 5$.
Key Vocabulary	Mathematical statements, addition, subtraction, equals, add, subtract, same as, plus, minus, more, less, fewer, greater, number bonds, inverse, digit, number sentence, missing number problem		
Multiplication and division	**Children know…** • Numbers to 50 • Understand meaning of lots of, share. **Children can…** • Solve one-step problems involving multiplication and division to 50, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	**Children know…** • Numbers to 100 • Understand meaning of lots of, groups of, share **Children can…** • Solve one-step problems involving multiplication and division to 100, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	**Children know…** • Numbers to 100 and beyond • Understand meaning of multiply, lots of, groups of, division, share. **Children can…** • Solve one-step problems involving multiplication and division to 100 and beyond, by calculating the answer using concrete objects, pictorial representations and arrays with support of the teacher
Key Vocabulary	Lots of, groups of, share, multiplication, multiply, division, divide, double, half, arrays		
Fractions	**Children know…** • Numbers to 50 • Language – half, equal parts • Understand fraction one half as divide by 2 **Children can…** • Recognise, find and name a half as one of two equal parts of an object, shape or quantity to 50	**Children know…** • Numbers to 100 • Language – half, quarter, equal parts • Understand fraction one half as divide by 2; understand fraction one quarter as divide by 4 **Children can…** • Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity to 100	**Children know…** • Numbers to 100 and beyond • Language – half, quarter, three quarters, equal parts • Understand fraction one half as divide by 2; understand fraction one quarter as divide by 4; understand fraction three quarter as divide by 4 then multiply by 3 **Children can…** • Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. • Recognise, find and name three quarter as three of four equal parts of an object, shape or quantity to 100 and beyond
Key Vocabulary	Half, quarter, whole, equal parts, divide, share, split		

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Measurement	**Children know…** • Language of length- long/short, tall/short, double/half • Language of weight - heavy/light • Language of volume - full/empty, half full **Children can…** • Measure (non-standard units), record, compare, describe and solve practical problems for lengths and heights [long/short, longer/shorter, tall/short, double/half] • Measure (non-standard units), record, compare, describe and solve practical problems for mass/weight [heavy/light, heavier than, lighter than] • Measure (non-standard units), record, compare, describe and solve practical problems for capacity and volume [for example, full/empty, more than, less than, half, half full)	**Children know…** • Language of length- long/short, longer/shorter, tall/short, double/half • Language of weight - heavy/light, heavier than, lighter than • Language of volume - full/empty, more than, less than, half, half full, quarter full • Measuring vessels such as ruler, measuring jug, scales etc. **Children can…** • Measure (standard units - cm; non-standard units), record, compare, describe and solve practical problems for lengths and heights [long/short, longer/shorter, tall/short, double/half] • Measure (standard units – g; non-standard units), record, compare, describe and solve practical problems for mass/weight [heavy/light, heavier than, lighter than] • Measure (standard units – ml); non-standard units), record, compare, describe and solve practical problems for capacity and volume [for example, full/empty, more than, less than, half, half full, quarter full)	**Children know…** • Language of length- long/short, longer/shorter, tall/short, double/half • Language of weight - heavy/light, heavier than, lighter than • Language of volume - full/empty, more than, less than, half, half full, quarter full, three quarter full • Measuring vessels such as ruler, measuring jug, scales etc. **Children can…** • Measure (standard units – cm and m), record, compare, describe and solve practical problems for lengths and heights [long/short, longer/shorter, tall/short, double/half] • Measure (standard units – g and kg), record, compare, describe and solve practical problems for mass/weight [heavy/light, heavier than, lighter than] • Measure (standard units - ml and l), record, compare, describe and solve practical problems for capacity and volume [for example, full/empty, more than, less than, half, half full, quarter full, three quarter full)
Key Vocabulary	Longer/est, shorter/est, lighter/est, heavier/est, taller/est, full, empty		
Geometry	**Children know…** • Language – whole, half, • Language – left, right, next to, beside, on top of, behind, in front, between, etc. **Children can…** • Describe position, direction and movement, including whole and half turns	**Children know…** • Language – whole, half, quarter and three-quarter turns **Children can…** • Describe position, direction and movement, including whole, half, quarter and three-quarter turns	**Children know…** • Language – whole, half, quarter and three-quarter turns **Children can…** • Describe position, direction and movement, including whole and half and quarter turns, clockwise and anticlockwise
Key Vocabulary	Whole, half, quarter, three quarter, left, right, next to, beside, on top of, behind, in front, between		
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Summer Term		
	Skills and concepts will be returned to from first 2 terms depending on the needs of the children. These concepts will be expanded upon to ensure firm foundations and working towards a greater understanding.		

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Year 2			
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Autumn Term		
Number and Place Value	**Children know…** • Can recite numbers to and from 50 • Read and write numbers to 50 • Symbols - < > = **Children can…** • Recognise the place value of each digit in a two-digit number to 50 (tens, ones) • Identify, represent and estimate numbers to 50 using different representations, including the number line • Compare and order numbers from 0 up to 50; use greater than >, less than < and = signs • Read and write numbers to at least 50 in numerals and in words • Use place value and number facts to solve problems within 50	**Children know…** • Can recite numbers to and from 100 • Read and write numbers to 100 • Symbols - < > = **Children can…** • Recognise the place value of each digit in a two-digit number to 100 (tens, ones) • Identify, represent and estimate numbers to 100, using different representations, including the number line • Compare and order numbers from 0 up to 100; use greater than >, less than < and = signs • Read and write numbers to at least 100 in numerals and in words • Use place value and number facts to solve problems within 100	**Children know…** • Can recite numbers to and from 100 and beyond • Read and write numbers to 100 and beyond • Symbols - < > = **Children can…** • Recognise the place value of each digit in a two-digit and three-digit number to 100 and beyond (hundreds, tens, ones) • Identify, represent and estimate numbers to 100 and beyond, using different representations, including the number line • Compare and order numbers from 0 to beyond 100; greater than >, less than < and = signs • Read and write numbers to 100 and beyond in numerals and in words • Use place value and number facts to solve problems to 100 and beyond
Key Vocabulary	Place value, hundreds, tens, ones, one-digit, two-digit, three-digit, estimate, number line, compare, order, greater than, less than, equal to, same as, numerals, number words		
Addition and Subtraction	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction **Children can…** • Solve problems with addition and subtraction to 20, using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems with addition and subtraction to 20, applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 10, and derive and use related facts up to 20	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction **Children can…** • Solve problems with addition and subtraction to 50, using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems with addition and subtraction to 50, applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 10 fluently, and derive and use related facts up to 20	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction **Children can…** • Solve problems with addition and subtraction to 100, using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems with addition and subtraction to 100, applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 20, and derive and use related facts up to 100 • Add and subtract numbers to 100 using concrete objects, pictorial representations, and mentally, including:

	• Add and subtract numbers to 20 using concrete objects, pictorial representations, and mentally, including: - a two-digit number and 1s • Show that addition of two numbers to 20 can be done in any order (commutative) and subtraction of one number from another cannot	• Add and subtract numbers to 50 using concrete objects, pictorial representations, and mentally, including: - a two-digit number and 1s - a two-digit number and 10s - 2 two-digit numbers • Show that addition of two numbers to 50 can be done in any order (commutative) and subtraction of one number from another cannot	- a two-digit number and 1s - a two-digit number and 10s - 2 two-digit numbers • Show that addition of two numbers to 100 can be done in any order (commutative) and subtraction of one number from another cannot
Key Vocabulary	Addition, add, plus, more, altogether, subtraction, subtract, minus, less, fewer, difference, one-digit, two-digit, three-digit, commutative law, numbers, quantities, measures, mental methods, written methods, hundreds, tens, ones		
Measurement	**Children know…** • Coins and notes represent and can make values. • Language – pounds and pence, change • Long and short hands on a clock tell different parts of time **Children can…** • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value to 50p • Find different combinations of coins that equal the same amounts of money to 50p • Solve simple problems in a practical context involving addition and subtraction of money of the same unit (pence to 50p), including giving change • Compare and sequence intervals of time – o'clock, half past, quarter past, quarter to • Tell and write the time to the o'clock, half past, quarter past and quarter to, and draw the hands on a clock face to show these times	**Children know…** • Coins and notes represent and can make values. • Language – pounds and pence, change • Long and short hands on a clock tell different parts of time **Children can…** • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value to £1/100p • Find different combinations of coins that equal the same amounts of money to £1/100p • Solve simple problems in a practical context involving addition and subtraction of money of the same unit (pence to 100p; pounds to £100), including giving change • Compare and sequence intervals of time – to five minutes • 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	**Children know…** • Coins and notes represent and can make values. • Language – pounds and pence, change • Long and short hands on a clock tell different parts of time **Children can…** • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value to £1/100p and beyond • Find different combinations of coins that equal the same amounts of money to £1/100p and beyond • Solve problems in a practical context involving addition and subtraction of money of the same unit (pence to 100p and beyond; pounds to £100 and beyond), including giving change • Compare and sequence intervals of time – to the nearest minute • Tell and write the time to the nearest minute, and draw the hands on a clock face to show these times e.g. 12 minutes past 6.
Key Vocabulary	Coins, notes, pounds, pence, addition, subtraction, change, o'clock, half past, quarter past, quarter to, minute, hour, intervals of time, minutes hand, hour hand		
Geometry	**Children know…** • 2-D shapes names – rectangle, square circle and triangle • 3-D shapes names -cuboid, cube, pyramid, sphere • Language – sides, faces	**Children know…** • 2-D shapes names – rectangle, square circle and triangle • 3-D shapes names -cuboid, cube, pyramid, prism and sphere	**Children know…** • 2-D shapes names – rectangle, square circle and triangle • 3-D shapes names -cuboid, cube, pyramid, prism and sphere

	Children can… • *Identify and describe the properties of 2-D shapes (circles, triangles, squares, rectangles), including the number of sides* • *Identify and describe the properties of 3-D shapes (cuboids, cubes, pyramids and spheres), including the number of faces* • *Identify 2-D shapes on the surface of 3-D shapes, [for example, a square on a cube]* • *Compare and sort common 2-D and 3-D shapes and everyday objects (2D – circles, triangles, squares, rectangles; 3D - cuboids, cubes, pyramids and spheres)*	• Language – sides, corners, edges, faces and vertices • Language – symmetry, symmetrical **Children can…** • *Identify and describe the properties of 2-D shapes (rectangles, squares, circles, triangles, pentagons, hexagons), including the number of sides and line symmetry in a vertical line* • *Identify and describe the properties of 3-D shapes (cuboids, cubes, pyramids, spheres, cones and cylinders), 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 (2D - rectangles, squares, circles, triangles, pentagons, hexagons; 3D - cuboids, cubes, pyramids, spheres, cones and cylinders)*	• Language – sides, corners, edges, faces and vertices • Language – symmetry, symmetrical **Children can…** • *Identify and describe the properties of 2-D shapes (rectangles, squares, circles, triangles, pentagons, hexagons, heptagon, octagons, oval, semi-circle), including the number of sides and line symmetry in a vertical line* • *Identify and describe the properties of 3-D shapes (cuboids, cubes, pyramids, spheres, cones, cylinders, triangular prism, hexagonal prism), 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 (2D - rectangles, squares, circles, triangles, pentagons, hexagons, heptagon, octagon, oval, semi-circle; 3D - cuboids, cubes, pyramids, spheres, cones, cylinders, triangular prism, hexagonal prism)*
Key Vocabulary	2D shapes, circle, triangle, square, rectangle, pentagon, hexagon, heptagon, octagon, oval, semi-circle, sides, 3D shapes, cube, cuboid, pyramid, sphere, cones, cylinder, triangular prism, hexagonal prism, faces, edges, vertices		
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Spring Term		
Number and Place Value	**Children know…** • *Can recite numbers to and from 50* • *Read and write numbers to 50* • *Symbols - < > =* **Children can…** • *Count in steps of 2, and 5 from 0, and in tens from any number to 50, forward* Revisit: • *Recognise the place value of each digit in a two-digit number to 50 (tens, ones)* • *Identify, represent and estimate numbers to 50 using different representations, including the number line* • *Compare and order numbers from 0 up to 50; use greater than >, less than < and = signs*	**Children know…** • *Can recite numbers to and from 100* • *Read and write numbers to 100* • *Symbols - < > =* **Children can…** • *Count in steps of 2, 3, and 5 from 0, and in tens from any number to 100, forward and backward* Revisit: • *Recognise the place value of each digit in a two-digit number to 100 (tens, ones)* • *Identify, represent and estimate numbers to 100, using different representations, including the number line* • *Compare and order numbers from 0 up to 100; use greater than >, less than < and = signs*	**Children know…** • *Can recite numbers to and from 100 and beyond* • *Read and write numbers to 100 and beyond* • *Symbols - < > =* **Children can…** • *Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward* Revisit: • *Recognise the place value of each digit in a two-digit and three-digit number to 100 and beyond (hundreds, tens, ones)* • *Identify, represent and estimate numbers to 100 and beyond, using different representations, including the number line* • *Compare and order numbers from 0 to beyond 100; greater than >, less than < and = signs*

Nyewood CE Infant School
Mathematics Progression in Knowledge and Skills

	• Read and write numbers to at least 50 in numerals and in words • Use place value and number facts to solve problems within 50	• Read and write numbers to at least 100 in numerals and in words • Use place value and number facts to solve problems within 100	• Read and write numbers to 100 and beyond in numerals and in words • Use place value and number facts to solve problems to 100 and beyond
Key Vocabulary	Count, steps, number, forward, backward, place value, hundreds, tens, ones, one-digit, two-digit, three-digit, estimate, number line, compare, order, greater than, less than, equal to, same as, numerals, number words		
Addition and Subtraction	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction • Addition and subtraction are inverses to help solve missing numbers **Children can…** • Solve problems with addition and subtraction to 50, using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems with addition and subtraction to 50, applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 10 fluently, and derive and use related facts up to 20 • Add and subtract numbers to 50 using concrete objects, pictorial representations, and mentally, including: - a two-digit number and 1s - a two-digit number and 10s - 2 two-digit numbers - adding 3 one-digit numbers • Show that addition of two numbers to 50 can be done in any order (commutative) and subtraction of one number from another cannot • Recognise and use the inverse relationship between addition and subtraction to 50, and use this to check calculations and solve missing number problems	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction • Addition and subtraction are inverses to help solve missing numbers **Children can…** • Solve problems with addition and subtraction to 100, using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems with addition and subtraction to 100, applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Add and subtract numbers to 100 using concrete objects, pictorial representations, and mentally, including: - a two-digit number and 1s - a two-digit number and 10s - 2 two-digit numbers - adding 3 one-digit numbers • Show that addition of two numbers to 100 can be done in any order (commutative) and subtraction of one number from another cannot • Recognise and use the inverse relationship between addition and subtraction to 100, and use this to check calculations and solve missing number problems	**Children know…** • Meanings of symbols + - = • Meaning of number bonds, addition, subtraction • Addition and subtraction are inverses to help solve missing numbers **Children can…** • Solve problems with addition and subtraction to 100 and beyond, using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems with addition and subtraction to 100 and beyond, applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 and beyond • Add and subtract numbers to 100 and beyond using concrete objects, pictorial representations, and mentally, including: - a two-digit number and 1s - a two-digit number and 10s - 2 two-digit numbers - adding 3 one-digit numbers • Show that addition of two numbers to 100 and beyond can be done in any order (commutative) and subtraction of one number from another cannot • Recognise and use the inverse relationship between addition and subtraction to 100 and beyond, and use this to check calculations and solve missing number problems
Key Vocabulary	Addition, add, plus, more, altogether, subtraction, subtract, minus, less, fewer, difference, one-digit, two-digit, three-digit, commutative law, numbers, quantities, measures, mental methods, written methods, hundreds, tens, ones, inverse		

Nyewood CE Infant School
Mathematics Progression in Knowledge and Skills

Multiplication and Division	**Children know…** • Numbers to 50 • To recite numbers is 2s, 5s, and 10s • Language – multiply, lots of, divide, share • Language – odd, even • Symbols – x = ÷ **Children can…** • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables to 50, including recognising odd and even numbers • Calculate mathematical statements for multiplication and division within the multiplication tables to 50, and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers to 50 can be done in any order (commutative) and division of one number by another cannot • Solve problems involving multiplication and division to 50, using materials, arrays, repeated addition, including problems in contexts.	**Children know…** • Numbers to 100 • To recite numbers is 2s, 5s, and 10s • Language – multiply, lots of, divide share • Language – odd, even • Symbols – x = ÷ **Children can…** • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables to 100, including recognising odd and even numbers • Calculate mathematical statements for multiplication and division within the multiplication tables to 100, and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers to 100 can be done in any order (commutative) and division of one number by another cannot • Solve problems involving multiplication and division to 100, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	**Children know…** • Numbers to 100 and beyond • To recite numbers is 2s, 3s, 5s, and 10s • Language – multiply, lots of, divide share • Language – odd, even • Symbols – x = ÷ **Children can…** • Recall and use multiplication and division facts for the 2, 3, 5 and 10 multiplication tables to 100 and beyond, including recognising odd and even numbers • Calculate mathematical statements for multiplication and division within the multiplication tables to 100 and beyond, and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers to 100 and beyond can be done in any order (commutative) and division of one number by another cannot • Solve problems involving multiplication and division to 100 and beyond, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Key Vocabulary	Multiplication, multiply, lots of, groups of, repeated addition, arrays, odd, even, division, divide, share, equally, equals, commutative, mental methods		
Fractions	**Children know…** • Fractions are split into equal parts • Language – quarter, half **Children can…** • Recognise, find, name and write fractions ½ and ¼ of a length, shape, set of objects or quantity to 50 • Write simple fractions for example, 1/2 of 6 = 3 (to 50)	**Children know…** • Fractions are split into equal parts • Language – half, third, quarter, three quarters **Children can…** • Recognise, find, name and write fractions ½, 1/3, ¼, 2/4, and ¾ of a length, shape, set of objects or quantity to 100 • Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and ½ (to 100)	**Children know…** • Fractions are split into equal parts • Language – half, third, quarter, three quarters **Children can…** • Recognise, find, name and write fractions ½, 1/3, 2/3, ¼, 2/4, and ¾ of a length, shape, set of objects or quantity to 100 and beyond • Write fractions for example, 1/2 of 40 = 20 and recognise the equivalence of 2/4 and ½ (to 100 and beyond)
Key Vocabulary	Fractions, parts, whole, half, quarter, third, equivalent, length, shape, quantity		

Nyewood CE Infant School
Mathematics Progression in Knowledge and Skills

Measurement	**Children know…** • Language – see key vocabulary • Standard units - g, ml, cm, °C • Measuring vessels such as ruler, measuring jug, scales etc. **Children can…** • Choose and use non-standard units and appropriate standard units to estimate and measure length/height in any direction (cm); mass (g); temperature (°C); capacity (ml), using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume/capacity and record the results using more than >, less than < and =	**Children know…** • Language – see key vocabulary • Language – kg, g, ml, litre, cm, metre, °C • Measuring vessels such as ruler, measuring jug, scales etc. **Children can…** • 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 more than >, less than < and =	**Children know…** • Language – see key vocabulary • Language – kg, g, ml, litre, cm, metre, °C • Measuring vessels such as ruler, measuring jug, scales etc. **Children can…** • 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 where some scale markers are missing (reading scale intervals) • Compare and order lengths, mass, volume/capacity and record the results using more than >, less than < and =
Key Vocabulary	Long/short, longer/shorter, tall/short, double/half, heavy/light, heavier than, lighter than, full/empty, more than, less than, half, half full, quarter, kg, g, ml, litre, cm, metre, °C, measuring vessels, ruler, measuring jug, scales, intervals, more than, greater than, less than, equal to		
Geometry	**Children know…** • 2D and 3D shape names and properties • Meaning of 'rotation' **Children can…** • Order and arrange combinations of mathematical objects in patterns and sequences (e.g. 2D and 3D shapes) • 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 full, half and quarter turns.	**Children know…** • 2D and 3D shape names and properties • Meaning of 'rotation' **Children can…** • Order and arrange combinations of mathematical objects in patterns and sequences (e.g. 2D and 3D shapes) • 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).	**Children know…** • 2D and 3D shape names and properties • Meaning of 'rotation' **Children can…** • Order and arrange combinations of mathematical objects in patterns and sequences (e.g. 2D and 3D shapes) • 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) and equivalent turns e.g. two quarter turns = 1 half turn
Key Vocabulary	Order, sequence, pattern, position, direction, movement, straight line, rotation, turn, whole, full, half, quarter, clockwise, anti-clockwise, equivalent		
Knowledge and Skills Area	**Emerging Towards** Expectations	**Working At** Expectations	**Exceeding** Expectations
	Summer Term		
Statistics	**Children know…** • What is a pictogram, block diagrams **Children can…**	**Children know…** • What is a pictogram, tally charts, block diagrams, table	**Children know…** • What is a pictogram, tally charts, block diagrams, table, line graph

(will be covered in other subject areas across the year)	• Interpret and construct simple pictograms and block diagrams • Ask and answer simple questions by counting the number of objects in each category	• The meaning of category, quantity, data **Children can…** • Interpret and construct simple pictograms, tally charts, block diagrams and 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	• The meaning of category, quantity, data **Children can…** • Interpret and construct pictograms, tally charts, block diagrams, tables, line graph • Ask and answer 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, including finding the difference (subtraction) and how many more/less (inverse).
Key Vocabulary	Pictogram, data, block diagram, category, table, tally chart, sorting, quantity, total, categorical data, compare, line graph, difference, addition, subtraction, more, less		
	Skills and concepts will be returned to from first 2 terms depending on the needs of the children. These concepts will be expanded upon to ensure firm foundations and working towards a greater understanding.		