Numicon teaching progression: Number, Pattern and Calculating 4 and Geometry, Measurement and Statistics 4

The Numicon teaching progression chart gives an overview of the expected coverage over the school year and the recommended order for teaching the activity groups. (Statistics work has been included within the Geometry and Measurement activity groups through appropriate contexts.)

See the long- and medium-term planning documents for Number, Pattern and Calculating 4 and Geometry, Measurement and Statistics 4 for references to assessment milestone statements; a fantastic tool for measuring children's progress.

Y3 I can statement	Y4 I can statement	Y5 I can statement	Activity to be taught
	Getting Started Getting started with Number, Pattern and Calculating 4		
I can understand place value of each digit in a 3 digit number.	Understanding place value in 4-digit numbers I can understand place value of each digit in a 3 digit number.	I can determine the value of each digit to 1000000.	Y3 Numbers and the Number System 4 Y4 Numbers and the Number System 1 Activity 4, 5 6
I can identify numbers using different representations. I can represent numbers using different representations. I can estimate numbers using different representations. I can round any number to nearest 10. I can round any number to nearest 100.	I can identify numbers using different representations. I can represent numbers using different representations. I can estimate numbers using different representations. I can round any number to nearest 10. I can round any number to nearest 100. I can round any numbers to nearest 1000.	I can round any number to 1000000 to the nearest 10. I can round any number to 1000000 to the nearest 100. I can round any number to 1000000 to the nearest 1000. I can round any number to 1000000 to the nearest 10000. I can round any number to 1000000 to the nearest 100000.	Y3 Numbers and the number system 6 Y4 NNS 1 Activity 1 Y4 NNS 2 Activity 5 Y4 NNS 3 Activity 2 3 5 Y5 NNS 4 Activity 2 3 4 7 8
I can read numbers to 1000 in numerals. I can read numbers to 1000 in words. I can write numbers to 1000 in numerals. I can write numbers to 1000 in words.	I can read numbers to 10000 in numerals. I can read numbers to 10000 in words. I can write numbers to 10000 in numerals. I can write numbers to 10000 in words.	I can read numbers to 1000000 in numerals. I can read numbers to 1000000 in words. I can write numbers to 1000000 in numerals. I can write numbers to 1000000 in words.	Matching games, bingo Early Bird Handwriting / spelling activities 6
I can count from 0 in multiples of 4 I can count from 0 in multiples of 8 I can count from 0 in multiples of 50 I can count from 0 in multiples of 100	I can count in multiples of 6 I can count in multiples of 7 I can count in multiples of 9 I can count in multiples of 25 I can count in multiples of 100	I can count forwards or backwards in steps of powers of 10 for any given number up to 1000000.	Y4 Pattern & Algebra 1 (number track / Numicon – select activities and appropriate numbers)
I can compare and order numbers up to 1000.	I can order and compare numbers beyond 1000.	I can compare numbers to 1000000	Y4 Numbers and the Number System 2
I can find 10 more or 10 less from a given number.	I can find 1000 more or less than a given number.	I can find 10,000 more or less than a given number	Y3 Calc 10 activity 3 and 6 (alter to relevant digit) and use counting activities.
I can solve number and practical problems involving the above.	I can solve number and practical problems involving the above with increasingly larger numbers.	I can solve number and practical problems involving the above with increasingly larger numbers.	Y4 Calc 1 Y3 Caclulating 1 Activity 6 Y3 Calculating 2 Activity 9 Y3 Calculating 9 Activity 12

I can add numbers mentally including 3 digit numbers and ones I can add numbers mentally including 3 digit numbers and tens I can add numbers mentally including 3 digit numbers and hundreds I can subtract numbers mentally including 3 digit numbers and ones I can subtract numbers mentally including 3 digit numbers and tens I can subtract numbers mentally including 3 digit numbers and hundreds	I can add numbers mentally including 4 digit numbers and ones I can add numbers mentally including 4 digit numbers and tens I can add numbers mentally including 4 digit numbers and hundreds I can subtract numbers mentally including 4 digit numbers and ones I can subtract numbers mentally including 4 digit numbers and tens I can subtract numbers mentally including 4 digit numbers and hundreds	I can add numbers mentally with increasingly larger numbers. I can subtract numbers mentally with increasingly larger numbers.	Y4 Calculating 2 Y4 Calculating 4 Y4 Calculating 5 Y5 Calculating 8 Y5 Calculating 9
I can add numbers with up to 3 digits using formal written methods of columnar. I can subtract numbers with up to 3 digits using formal written methods of columnar.	I can add numbers with up to 4 digits using formal written methods of columnar not crossing 10s barrier. I can subtract numbers with up to 4 digits using formal written methods of columnar not crossing 10s barrier. I can add numbers with up to 4 digits using formal written methods of columnar crossing 10s barrier. I can subtract numbers with up to 4 digits using formal written methods of columnar crossing 10s barrier.	I can add whole numbers with more than 4 digits including using formal written methods. I can subtract whole numbers with more than 4 digits including using formal written methods.	Y4 Calculating 8 Y4 Calculating 9
I can solve problems including missing number problems, place value, using number facts and more complex addition and subtraction.	I can solve addition and subtraction 2 step problems in contexts. I can decide which operations to use for addition and subtraction 2 step problems and explain why.	I can solve addition and subtraction multi step problems in contexts. I can decide which operations to use for addition and subtraction multi step problems and explain why.	Y4 Calculating 14
I can recall and use x facts to3 x table. I can recall and use dividing facts to 3 x table I can recall and use x facts to 4 x table. I can recall and use dividing facts to 4 x table I can recall and use x facts to 8 x table. I can recall and use dividing facts to8 x table	I can recall x facts for 6x table I can recall x facts for 7x table I can recall x facts for 9x table I can recall x facts for 11 x table. I can recall division facts for 6 x table I can recall division facts for 7x table I can recall division facts for 9x table I can recall division facts for 11x table	I can multiply numbers mentally using known number facts I can divide numbers mentally using known number facts	Y4 Calculating 5 Y4 Calculating 6 Y3 Calculating 10 Activity 2 and 6 Early Bird Precision Teaching Daily repeated practice and overlearning
I can use my multiplication facts to multiply mentally. I can use my multiplication facts to divide mentally.	I can use place value and facts to multiply mentally. Including by 0 and 1. I can use place value and facts to divide mentally. Including by 0 and 1. I can multiply together 3 numbers		Y4 Calculating 5 Y4 Calculating 6 Y3 Calculating 10 Activity 2 and 6 Early Bird Precision Teaching Daily repeated practice and overlearning
I can use the inverse to solve multiplication problems.	I can recognise and use factor pairs to multiply. I can recognise and use commutivaty to multiply.	I can identify multiples and factors including finding all factor pairs of a number and common factors of 2 numbers.	Y4 Calculating 5 Activity 4 Pattern and Algebra 2 Pattern and Algebra 4
I can multiply by 10 **I can divide by 10**	**I can multiply by 10** **I can divide by 10** **I can multiply by 100** **I can divide by 100**	**I can multiply by 10** **I can divide by 10** **I can multiply by 100** **I can divide by 100**	Y4 Calculating 7

		I can multiply by 1000 **I can divide by 1000**	
	Geometry 2 Understanding reflective symmetry		
I can count backwards from 1000	I can count backwards through 0 to include negative numbers.	I can count backwards through zero from 10,000	Y4 NNS 4 scaling up and down
	Fractions and recognizing part-whole relationships **Numbers and the** **Number System 5**		
	Geometry 3 Investigating angles in shapes		
	Numbers and the **Number System 6** Introducing decimal fractions		

Y3 I can statement	Y4 I can statement	Y5 I can statement	Activity to be taught
	Pattern and Algebra 3 Exploring 'equals' in balancing number sentences		
I can write and calculate mathematical statements for x using multiplication tables they know. I can write and calculate mathematical statements for dividing using x tables they know. I can calculate maths statements for 2 digits x 1 digit number.	**I can multiply 2 digit numbers by a 1 digit number using formal written methods.** **I can multiply 3 digit numbers by a 1 digit number using formal written methods.**	I can multiply numbers up to 4 digits by a 1 digit number using the formal written method I can multiply numbers up to 4 digits by a 2 digit number using long multiplication. I can interpret remainders for the appropriate context in division.	Y4 Calculating 10 Y4 Calculating 11 Y4 Calculating 12 Y4 Calculating 13 Y5 remainders (discrete)
I can solve missing number problems involving x I can solve missing number problems involving division I can solve problems including positive integer scaling problems. I can solve problems in which n objects are connected to m obkects.	I can solve problems involving multiplying and adding using the distributive law to x a 2 digit by a 1 digit. I can solve multiplication integer scaling problems. I can solve multiplication problems suc as n objects are connected to m objects.	I can solve problems involving multiplying and adding using the distributive law to x a 2 digit by a 1 digit. I can solve multiplication integer scaling problems. I can solve multiplication problems such as n objects are connected to m objects. I can solve multiplication problems including factors, squared numbers and cube numbers.	Y4 Calculating 10 Y4 Calculating 11 Y4 Calculating 12 Y4 Calculating 13
		I can use the vocabulary of prime numbers, prime factors and composite (non prime) numbers. I can establish whether a number up to 100 is prime and recall prime numbers to 19. I can recognise and use cube numbers and the notation for cubed I can recognise and use squared numbers and use notation for squared.	Y5 Pattern and Algebra3 Activity 6 7 Y5 Pattern and Algebra 4 Activity 4 Y4 Calculating 5 Activity 6 7 Y4 – links to volume and capacity / area?
I can count up in tenths. **I can count down in tenths.** **I can recognise that tenths arise by dividing an object or number into 10 equal parts.**	**I can count up in hundredths** **I can count down in hundredths** **I can recognise that hundredths arise by dividing an object or number into 100 equal parts.**	I can compare and order fractions whose denominators are all multiples of the same number.	Y4 NNS 7 Activity 5 Y4 NNS 8 Activity 1 2 3 5 6 Y5 Pattern and Algebra 1 activity 6 7
I can recognise and use fractions as numbers. I can recognise and use fractions as unit fractions and non unit fractions with small demoninators. I can recognise, find and write fractions of a discrete set of objects. I can recognise, find and write fractions of unit fractions and non unit fractions with a small denominator.	I can recognise, find and write fractions of unit fractions and non unit fractions with a larger denominator.	I can recognise, compare, find and write fractions of unit fractions and non unit fractions with a larger denominator.	Y3 NNS 8 – uplevel for Y4 and 5
I can recognise and show using diagrams, equivalent fractions with small denominators	I can recognise and show using diagrams, families of common equivalent fractions.	I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.	Y4 NNS 5 Activity 1 2 3 4 Y5 NNS 1 Activity 6 7
I can add and subtract fractions that are the same denominator.	I can add and subtract fractions with the same denominator.	I can add and subtract fractions with the same denominator and denominators that are multiples of the same number	Y4 NNS 5 Activity 5 6

	I can recognise and write decimal equivalents of any number of tenths or hundredths	I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Y5 NNS 6 Activity 4 Y4 NNS 8 Activity 1 2 3
	I can recognise and write decimal equivalents to ¼ ½ and ¾	I can read and write decimal numbers as fractions.	Y4 NNS Activity 8 1 2 3
	I can find the effect of dividing a 1 or 2 digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths, 100ths		Y5 NNS 8 3 4
	Round decimals with one decimal place to the nearest whole number.	Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place	Y4 NNS 6 Activity 9 Y5 NNS 4 Activity 5 6
I can compare and order unit fractions with the same denominator	I can compare numbers with the same number of decimal places up to 2 decimal places.	I can read, write and order and compare number with up to 3 decimal places Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Recognise mixrd numbers and improper fractions and convert from one form to another and write mathermatical statements. I can recognise the % symbol and understand that per cent relates to number of parts per 100	Year 4 photocopy master 8 – fraction circles Y5 – use CPA % linked to 100 square / baseboard
I can solve problems involving all of2/5 4/5 the above	I can solve problems using fractions.	I can solve problems involving number to 3 decimal places. I can solve problems which require knowing percentage and decimal equivalents of ½ ¼ /1/5 **of2/5 4/5 and those fractions with a denominator of a multiple of 10 or 25.**	Y4 NNS 7 8 Y5 Calculating 11
	Pattern and Algebra 6 Solving problems and puzzles systematically		
	Measurement 6 Understanding perimeter and area		
	Pattern and Algebra 7 Exploring general rules, reasoning and logic		