St. John the Evangelist Catholic Academy

Part of the Newman Catholic Collegiate

Mathematics Progression Ladders

Year 1

- Blue highlighting denotes specific material moved down from a higher year.
- Yellow highlighting denotes content not explicit in the PNS for the year. It often indicates little more than an expansion and clarification of what was already being taught using the PNS. Also highlighted is the same material in all 3 terms, where it is typically taught in the autumn term, but used and reinforced in subsequent terms.
- **Purple text** denotes repeated statements.
- *Italics* indicate illustrative examples, non-statutory notes and guidance from the new PoS. (NB most of the non-statutory notes and guidance are new, from a higher year, or beyond the PNS.)

Year 1	Basic 1	Basic 2	Advancing 1
NUMBER			
Place value and rounding	• Count to 100, forwards and backwards, beginning with 0 or 1, or from any given number *e.g. 19, 18, 17, 16, …* • Count, read and write numbers to 100 in numerals, count in multiples of twos and tens *e.g. 2, 4, 6, 8, 10, 12, …* • Given a number, identify one more and one less • Identify and represent numbers 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 • *Use language of ordering e.g. first, second, third*	• 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, count in multiples of twos, fives and tens *e.g. 22, 24, 26, 28, 30, … or 90, 80, 70, 60, …* • Given a number, identify one more and one less • Identify and represent numbers 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. • *Use language of ordering e.g. first, second, third* • *Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100 supported by objects and pictorial representations* • *Begin to order numbers to 100 (different tens) e.g. order 36, 29, 63, 5* • When guidance or prompts are given,	• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number *e.g. 103, 102, 101, 100, 99, 98, …* • Count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens *e.g. 5, 10, 15, 20, 25, …* • Given a number, identify one more and one less **(able to say one more or one less than a number beyond 100)** • Identify and represent numbers 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. • *Use language of ordering e.g. first, second, third* • *Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100 supported by objects and pictorial representations* • *Begin to order numbers to 100 (different tens)* • *Recognise odd and even numbers*

		the place value of each digit in a two-digit number is recognised	
Addition and subtraction	•Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs •Represent, *memorise* and use number bonds and related subtraction facts *within 10, in several forms e.g. 3 + 4 = 7; 4 = 7 – 3;* •Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero •Solve simple one-step problems *(in familiar practical contexts, including using quantities)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems *e.g. 3 + □ = 7* •*Problems should include vocabulary such as: put together, add, altogether, total, take away, more than, less than…* •Work is recorded with objects, pictures or diagrams.	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • Represent, *memorise* and use number bonds and related subtraction facts *within 10, in several forms, and begin to know doubles to 20 e.g. 8 + 8 = 16 complements to 20 e.g. 8 + 12 = 20* • Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero • Solve simple one-step problems *(in familiar practical contexts, including using quantities)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems • *Problems should include vocabulary such as: put together, add, altogether, total, take away, distance between, more than, less than…*	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • Represent, *memorise* and use number bonds and related subtraction facts within 20, *in several forms e.g. 9 + 7 = 16; 16 – 7 = 9; 7 = 16 - 9* • Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero • Solve simple one-step problems *(in familiar practical contexts, including using quantities)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems *e.g. 7 = □ - 9* • *Problems should include vocabulary such as: put together, add, altogether, total, take away, distance between, more than, less than…*

Multiplication and division	• *Double and halve numbers to 20 e.g. double 6 is 12, half of 10 is 5* • recognise patterns of numbers in 2x table • solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, with the support of the teacher.	• *Double and halve numbers to 20 e.g. double 8 is 16, half of 20 is 10* • With the support of a teacher, multiplication facts are used to check the accuracy of calculations. • recognise patterns of numbers in X2, X10 • With the support of a teacher, pictorial representations and concrete objects, odd and even numbers are recognised. • There is an awareness of the operations multiplication and division. There is an awareness of the signs x, ÷, = and what they represent. • Independently, mathematical statements for multiplication and division are calculated and the signs x, ÷, = are used correctly	• *Double and halve numbers to 20* • Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher *e.g. share 8 sweets between 2 children* • group objects into 2,5,or 10 to aid counting • recognise patterns of numbers in x2, x10, x5 • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Fractions	• Recognise, find and name a half as one of two equal parts of an object, shape, *length* or quantity *e.g. Find half of a length of string, by folding;* • find half of a quantity less than 10 •	• Recognise, find and name a half as one of two equal parts of an object, shape, length or quantity *e.g. What is half of 12 counters?* • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *e.g. find a quarter of a shape, by folding in half and half again* • With the support of a teacher and pictorial representations or concrete objects, 1/4, 2/4, 1/2, 1/3 and 3/4 of a length, shape, set of objects or quantity are recognised, found and named.	• Recognise, find and name a half as one of two equal parts of an object, shape, length or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *e.g. find $\frac{1}{4}$ of 12 beads, practically*

		• When concrete objects, pictorial representations and the support of a teacher are provided, the equivalence of 2/4 and 1/2 is recognised.	
MEASUREMENT			

Measurement	• Compare, describe and solve practical problems for:
	  ○ lengths and heights *(e.g. long/short, longer/shorter, tall/short, double/half)*
	  ○ mass or weight *(e.g. heavy/light, heavier than, lighter than)*
	  ○ capacity/volume *(full/empty, more than, less than)*
	  ○ time *(quicker, slower, earlier, later)*
	
	• *Use non standard measures to* measure and begin to record the following:
	  ○ lengths and heights
	  ○ mass/weight
	  ○ capacity and volume
	
	• Recognise and know the value of different denominations of coins
	
	• Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening
		• Compare, describe and solve practical problems for:
		  ○ lengths and heights *(e.g. long/short, longer/shorter, tall/short, double/half)*
		  ○ mass or weight *(e.g. heavy/light, heavier than, lighter than)*
		  ○ capacity/volume *(full/empty, more than, less than, quarter)*
		  ○ time *(quicker, slower, earlier, later)*
		
		• *Begin to use measuring tools (ruler, weighing scales, containers) to* measure and begin to record the following:
		  ○ lengths and heights
		  ○ mass/weight
		  ○ capacity and volume
		  ○ time (hours, minutes)
		
		• Recognise and know the value of different denominations of coins and notes
		
		• Sequence events in chronological order using language such as: before and after, next, first, today,
			• Compare, describe and solve practical problems for:
			  ○ lengths and heights *(e.g. long/short, longer/shorter, tall/short, double/half)*
			  ○ mass or weight *(e.g. heavy/light, heavier than, lighter than)*
			  ○ capacity/volume *(full/empty, more than, less than, quarter)*
			  ○ time *(quicker, slower, earlier, later)*
			
			• *Begin to use standard measures (metres, cms, grams/kg, litres) to* measure and begin to record the following:
			  ○ lengths and heights
			  ○ mass/weight
			  ○ capacity and volume
			  ○ time (hours, minutes, seconds)
			
			• Recognise and know the value of different denominations of coins and notes
			
			• Sequence events in chronological order using language such as: before and after, next, first, today,

	• Recognise and use language relating to dates, including days of the week, weeks, months and years • Tell the time to the hour and draw the hands on a clock face to show these times.	yesterday, tomorrow, morning, afternoon and evening • Recognise and use language relating to dates, including days of the week, weeks, 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.	yesterday, tomorrow, morning, afternoon and evening • Recognise and use language relating to dates, including days of the week, weeks, 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.
GEOMETRY			
Properties of shapes	• Recognise and name common 2-D and 3-D shapes, including: ○ 2-D shapes *(e.g. rectangles (including squares), circles and triangles)* ○ 3-D shapes *(e.g. cuboids, including cubes, pyramids and spheres).*	• Recognise and name common 2-D and 3-D shapes, *in different orientations and sizes*, including: ○ 2-D shapes *(e.g. rectangles (including squares), circles and triangles)* ○ 3-D shapes *(e.g. cuboids, including cubes, pyramids and spheres).* • *know that rectangles, triangles, cuboids and pyramids can be different shapes* • Simple properties of 2-D shapes are described, such as side or corner. Through supported activity such as folding, there is an awareness of symmetry. • Simple properties of 3-D shapes are described, such as the number of faces • With support, 2-D faces on the surface of 3-D shapes are recognised • Simple 2-D shapes on the surface of	• Recognise and name common 2-D and 3-D shapes, *in different orientations and sizes*, including: ○ 2-D shapes *(e.g. rectangles (including squares), circles and triangles)* ○ 3-D shapes *(e.g. cuboids (including cubes), pyramids and spheres).* • *know that rectangles, triangles, cuboids and pyramids can be different shapes*

		3-D shapes are identified.	
Position and direction	• *Describe positions, directions and movements using language such as left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside…*	• *Describe positions, directions and movements using language such as left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside…* • Describe position, directions and movements, including half and quarter turns, *in a clockwise direction*	• *Describe positions, directions and movements using language such as left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside…* • Describe position, directions and movements, including half, quarter and three-quarter turns, *in a clockwise direction*