Our Lady School Curriculum – Progression Grid for the Maths Curriculum

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Reception					
Unit/Topic	National Curriculum objectives	Skills	Sticky knowledge	New vocabulary	Real world stimuli
123 Good to be Me! Celebrations	**ELG: Number** Children at the expected level of development will: - Have a deep understanding of number 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. **ELG: Numerical Patterns** Children at the expected level of development will:	RLS1 Subitising (including equivalence, more and less) RLS2 Counting Skills (stable order and one to one correspondence) RLS3 Comparison – Measures RLS4 Pattern Recognition RLS5 Classification RLS6 Counting the Sort (including cardinality)	Subitising numbers up to 5; recognising the amount without counting Counting reliably, using number names in order and one to one correspondence Comparing objects by length, thickness and weight/mass, using appropriate language to describe and order them Noticing, describing and extending patterns, including thinking about what part is the repeating unit Classifying (grouping) objects using given criteria and their own ideas and thinking about the groups after classification Counting a set of items accurately, saying how many are in the set and comparing this to the amount in other sets	More Less Fewer Few Most Many Together Different None Same Bigger Smaller Longer Higher Shorter Guess Match Repeat Again Follow Order Next	Ages, birthdays, days of week, months of year songs Advent calendar – countdown Role play

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What a Wonderful World Once Upon a Time	- 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.	RLS7 Using Counting to Compare RLS8 Spatial Thinking RLS9 Magnitude – Ordering and Estimating RLS10 Regrouping the Whole RLS11 Regrouping parts to find the total (the whole) RLS12 Finding the whole and missing parts Exploring what to do	Using counting to compare and finding a precise numerical difference in sets of objects in varied contexts Developing spatial thinking and spatial language linked to position and direction, in movements and using symbols Knowing the position of numbers 0-10 and the relationship to other numbers, including whether they are close to 0, 5 or 10 Developing a deeper understanding that numbers are made up of other numbers and beginning to rehearse number bonds Combining parts to make a whole and using the part, whole model to develop an understanding of addition when something is missing in a part, whole model; making links to subtraction and finding the difference	More Less Fewer Few Most Many Together Different None Same Bigger Smaller Longer Higher Shorter Guess Match Repeat Again Follow Order Next	Different countries: Flags/Patterns Money Buildings Traditional tales/Nursery Rhymes Role play

Growing & Changing All Creatures Great & Small		RLS13 Ten and Some More RLS14 Doubling and Halving RLS15 Odd and Even RLS16 Counting Beyond 20	Counting confidently to 20, focusing on the numbers 10 – 20, and finding one more and one less than a number Exploring doubling and halving, including solving problems involving doubling and halving Understanding that numbers are either odd or even, looking at their 'shape' and whether they share fairly into two groups Counting beyond 20, recognising the pattern of the counting system, exploring the value of tens and ones in numbers	More Less Fewer Few Most Many Together Different None Same Bigger Smaller Longer Higher Shorter Guess Match Repeat Again Follow Order Next	Life Cycles Habitats Role play

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Year 2					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Real world stimuli
Place value Numbers to 10 Estimation Numbers to 20 Money	Compare, position and describe position, direction and movement, including whole, half, quarter and three-quarter turns. 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 Recognise and use language relating to dates, including days of the week, weeks, months and years Given a number, identify one more and one less Add and subtract one-digit and two-digit numbers to 20, including zero. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Represent and use number bonds and related subtraction facts within 20 Recognise and know the value of different denominations of coins and notes	To know the order to 100. To know the names of shapes. To know vocabulary related to measures	Numbers to one hundred Hundreds Partition, recombine Hundred more/less Quarter past/to m/km, g/kg, ml Size Bigger, larger, smaller Symmetrical, line of symmetry	Count Order Compare Greatest Largest Smallest Fewer fewest	Problem solving Recognising denominations of money Measuring Addition and subtraction	Maths Investigation week Number Day Destination questions My maths
Statistics Numbers to 20 Counting in 2's, 5's, 10's Multiplication Division	To know the meaning of vocabulary relating to time. To know how to count in 2's, 5's and 10's. To know how to draw the axis of a graph.	Count, tally, sort Vote, Graph, block graph, pictogram, Represent Predict Describe the pattern, describe the rule Find, find all, find different Investigate	Shape Pattern Build Whole turn Half turn Quarter turn Straight Curved Clockwise Anti-clockwise	Drawing graphs Measuring Telling the time Problem solving	
Multiplication and Division Multiplication Division Geometry Numbers to 100	To know the numbers up to 100. To know the features of shapes. To know simple fractions.	fraction half, halfway, between halve, quarter, whole part, equal parts, one whole, parts of a whole, number of parts left over one-half, one-quarter, threequarters group how many …?, how many more to make …?, how many more is … than …?, how much more is…? how many fewer is … than …?, how much less is …?, what is the difference between, group, share, equal groups of, grouping array, row, column	Fraction Halve Quarter Whole Equal Left over Minute Hour Second	Counting Using language relating to dates Telling the time Recognising fractions	

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Year 3					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Real world stimuli
Place value Measure Written calculation Statistics Shape Angles	Recognise the place value of each digit in a three-digit number (hundreds, tens and ones). Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Add and subtract numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Interpret and present data using bar charts, pictograms and tables Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. Recognise that angles are a property of shape or a description of a turn Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. Measure the perimeter of simple 2-D shapes	To know how to describe the place value of 3 digit numbers. To know the vocabulary to describe angles.	Count, order, compare Measure, narrow, deep, shallow thick, thin collect, organise, compare, order, sort, group, classify 3-D, three- dimensional 2-D, two dimensional net, construct regular, irregular	Counting Measuring Classifying shapes Area and Perimeter Measuring Angles	Maths Investigation week Number Day N- Rich investigations Destination questions My maths Times table rockstars
Multiplication Division Fractions Statistics		To know how to draw a selection of graphs. To know equivalent fractions.	inverse equation informal method jottings, diagrams, pictures, images denominator, numerator equivalent fraction count, tally vote	Recognising fractions Problem solving Interpreting graphs	
Division Multiplication Time Place value Measure 3D shape		To know the features of a selection of 3D shapes. To know how to calculate intervals of time.	place value partition hundreds, thousands centimetre (cm), metre (m) ruler, metre stick, tape measure	Classifying shapes Solving problems relating to time Drawing 3D shapes Constructing 3D shapes	

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Year 4					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Real world stimuli
Place Value Addition Subtraction Factors Multiply and divide by 10,100,1000 Measures Graphs Perimeter	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones) Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Add and subtract number with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Recognise and use factor pairs Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	To know how to use greater than and less than signs. To know multiples of numbers.	greater than, bigger than, more than, larger than digit next, consecutive sequence measure, measurement size compare unit, standard unit metric unit, imperial unit add, addition, more, plus, increase sum, total, altogether Subtract, subtraction, take away, minus,	Finding Factor pairs Using the 4 operations Interpreting graphs Measuring Calculating perimeter	Maths Investigation week Number Day N- Rich investigations Destination questions My maths Times table rockstars
Shape Decimals Money Fractions Multiplication Division		To know the names of new shapes. To know how to use formal written methods.	curved, straight round hollow, solid face, side, edge, end 3D, three-dimensional penny, pence, pound, (£) price, cost fraction one whole half, quarter, eighth third, sixth	Classifying shapes Solving money problems Using the 4 operations Recognising fractions	
Time Statistics Roman Numerals Negative numbers Angles Shape Area		To know values of Roman numerals. To know that numbers extend below 0.	timetable, arrive, depart hour, minute, second o'clock, half past, quarter to, quarter past count, tally, sort, vote survey, questionnaire, data Acute, obtuse, right angle	Interpreting graphs Measuring Angles Calculation with Roman numerals Calculating area of regular shapes	

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Year 5					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Real world stimuli
Place value Addition and subtraction Written formal methods fractions	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 with up to 3 decimal places Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Multiply and divide numbers mentally drawing upon known facts Add and subtract numbers mentally with increasingly large numbers Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 11/5] Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 11/5]	To know how to apply powers of 10 To know Prime factors	Powers of 10, Efficient written method Composite numbers, prime number, prime factors, square number, cubed number Proper fractions, improper fractions, mixed numbers	Using the 4 operations Written formal methods Identifying Prime numbers Calculating fractions	Maths Investigation week Number Day N- Rich investigations Destination questions My maths Times table rockstars
Fractions Measure Area Shape Percentages Angles		To know how to calculate fractions of amounts To know how to calculate the area of irregular shapes To know how to calculate the area of compound shapes.	Volume Imperial units, metric units Percentage Half, quarter, fifth, two fifths, four fifths fraction, proper/improper fraction equivalent fraction mixed number numerator, denominator reflex face, edge, vertex, vertices	Calculating fractions Measuring and drawing angles Calculating percentages Classifying shapes	
Written formal methods Scaling Fractions Time tables Polygons Statistics Roman Numerals		To know how to Scale numbers To know how to convert mixed fractions and improper numbers. To know how to interpret problems involving 4 quadrants	missing number tens boundary, hundreds boundary, ones boundary, tenths boundary inverse parallel, perpendicular x-axis, y-axis, quadrant survey, questionnaire, data, database graph, block graph, pictogram	Problem solving Reading Timetables Scaling numbers Interpreting graphs and charts	

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Year 6					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Real world stimuli
Place value Multiply and divide by 10,100,1000 Factors, multiple, primes Fractions, decimal, percentages Area Shape	Solve number problems and practical problems that involve place value Perform mental calculations, including with mixed operations and large numbers Solve problems involving addition, subtraction, multiplication and division Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions >1 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] Multiply multi-digit numbers up to 4-digits by a two-digit whole number using the formal written method of long multiplication Calculate the area of parallelograms and triangles Use written division methods in cases where the answer has up to two decimal places Compare and classify geometric shapes based on their properties and sizes Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	To know how to calculate percentages of totals	negative numbers formula divisibility square number prime number factorise prime factor ascending/descending order digit total multiplication fact, division fact inverse square, squared cube, cubed equivalent fraction mixed number numerator, denominator equivalent, reduced to, cancel Vertically opposite (angles) Circumference, radius, diameter	Finding factors, prime factors and multiples. Formal written methods of the 4 operations	Maths Investigation week Number Day N- Rich investigations Destination questions My maths Times table rockstars
Order of operations Algebra Angles, reflection, translation Fractions Ratio and proportion Measures Statistics		To know how to solve calculations using the order of operations. To know how to Translate shapes between quadrants.	Order of operations Common factors, common multiples Linear, number sequence, Substitute, Variables Symbol, Known values centimetre, metre, millimetre, kilometre, mile, yard, foot, feet, inch, inches	BIDMAS Drawing and measuring angles Translating shapes Solving Ratio and proportion questions	
Pie charts Statistics Financial maths and enterprise KS3 preparation		To know how to Interpret pie charts To know how to calculate a budget.	formula, formulae equation unknown variable metric unit, imperial unit measuring scale, division guess, estimate discount currency profit, loss	Interpreting pie charts Financial capability Transition to KS3	