John Donne Primary School

Skills Progression for Mathematics

EYFS Skills progression – Mathematics – Number & Numerical Patterns		
Playing & Exploring - Engagement	**Active Learning - Motivation**	**Creating & Thinking Critically - Thinking**
• Finding out & exploring • Playing with what they know • Being willing to 'have a go'	• Being involved & concentrating • Keep on trying • Enjoying achieving what they set out to do	• Having their own ideas (creative thinking) • Making links (building theories) • Working with ideas (critical thinking

ELG Number
- 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
- 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.

Focus	Place Value: Counting	Place Value: Represent	Place Value: Use & compare	Addition & Subtraction: Recall, represent, use	Addition & Subtraction: Calculations	Addition & Subtraction: Solve problems
EYFS	• Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0 • Counts out up to 10 objects from a larger group (1-1 correspondence)	• Engages in subitising numbers to four and maybe five • Increasingly confident at putting numerals in order 0 to 10 (ordinality) • Matches the numeral with a group of items to show how many there are (up to 10) Use amounts double or more.	• Uses number names and symbols when comparing numbers, showing interest in large numbers • Estimates of numbers of things, showing understanding of relative size • Compare quantities using language 'more than' 'less than'	• Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and + or - • Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects	• In practical activities, adds one and subtracts one with numbers to 10 Explore number bonds for numbers 0-5 and some to 10.	• Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three

EYFS Skills Progression – Space, Shape and Measure				
Focus	**Spatial Awareness**	**Shape**	**Pattern**	**Measure**
EYFS	• Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints • Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning) • May enjoy making simple maps of familiar and imaginative environments, with landmarks	• Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes • Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes • Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build	• Spots patterns in the environment, beginning to identify the pattern "rule" • Chooses familiar objects to create and recreate repeating patterns beyond AB patterns and begins to identify the unit of repeat	• Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy • Becomes familiar with measuring tools in everyday experiences and play • Is increasingly able to order and sequence events using everyday language related to time • Beginning to experience measuring time with timers and calendars

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and Place value	• 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 • identify and represent numbers using objects and pictorial representations including the number line, & use language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words • read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number • compare and order numbers from 0 up to 100; use <, > and = signs • identify, represent and estimate numbers using different representations, including the number line • read and write numbers to at least 100 in numerals and in words	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. • recognise the place value of each digit in a three-digit number • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words	• count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number • count backwards through zero to include negative numbers • recognise the place value of each digit in a four-digit number • order and compare numbers beyond 1000 • round any number to the nearest 10, 100 or 1000 • identify, represent and estimate numbers using different representations • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	• count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • read, write, order and compare numbers up to 1 000 000 and determine the value of each digit • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • read Roman numerals to 1000 (M) and recognise years written in Roman numerals • recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	• use negative numbers in context, and calculate intervals across zero • read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • round any whole number to a required degree of accuracy
Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction	Represent and use number bonds to 20; add/subtract 1-digit and 2-digit numbers to 20; solve simple one-step problems.	Add and subtract numbers using concrete/visual methods and mentally (two 2-digit numbers); recognise inverse operations; solve simple word problems.	Add and subtract numbers up to 3 digits mentally and using column method; estimate and check answers; solve missing number problems.	Add and subtract 4-digit numbers using formal written methods; solve two-step problems in context; use rounding to check answers.	Add and subtract numbers with more than 4 digits using efficient methods; use estimation and inverse operations; solve multi-step problems.	Use formal written methods for large numbers/decimals; solve multi-step problems with mixed operations; use knowledge of order of operations.
Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication and Division	Solve one-step problems using objects and arrays; double and halve numbers to 20; share into equal groups.	Recall 2, 5, 10 times tables; recognise odd/even; calculate multiplication/division facts for these tables.	Recall 3, 4, 8 times tables; use arrays and mental strategies; multiply 2-digit × 1-digit numbers; solve word problems.	Recall multiplication facts to 12×12; use formal short multiplication and division; recognise factor pairs.	Multiply 4-digit numbers by 1-digit and 2-digit numbers using formal methods; divide numbers up to 4 digits by 1-digit; interpret remainders.	Multiply up to 4-digit × 2-digit numbers (long multiplication); divide 4-digit numbers by 2-digit divisors; interpret remainders as fractions or decimals; solve multi-step problems.
Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions, Decimals and Percentages	Recognise and find half and quarter of objects, shapes and quantities.	Find, name and write 1/3, 1/4, 1/2, 3/4; recognise simple equivalence (e.g. 2/4 = 1/2); solve fraction problems.	Recognise and use unit/non-unit fractions; compare fractions; find fractions of sets; begin to understand tenths; add/subtract simple fractions.	Recognise families of equivalent fractions; count in hundredths; solve problems with fractions of quantities; link fractions to decimals.	Compare and order fractions with denominators multiples of the same number; add/subtract fractions; read/write decimals to 2dp; recognise % symbol and link fractions/decimals/percentages.	Simplify fractions; compare and order by finding common denominators; add/subtract fractions with different denominators; multiply and divide fractions; link FDP equivalences.
Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Measurement	Compare, describe and record lengths, mass, volume; use language of time; recognise coins/notes; tell time to hour/half hour.	Choose appropriate units (cm, m, g, kg, ml, l); use £/p; find total and change; tell and write time to 5 minutes.	Measure, compare and add lengths, mass, volume; measure perimeter; tell time to nearest minute; use Roman numerals to XII; estimate and read time.	Convert between units of measure (km/m, hr/min); find area of rectilinear shapes; read/write/convert analogue and digital time.	Convert between metric units; understand imperial units; measure perimeter/area of rectangles; calculate volume; solve scaling problems.	Use, read, convert between miles/km; calculate area of triangles/parallelograms; find volume of cubes/cuboids; solve problems involving time/duration.
Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry	Recognise and name 2D/3D shapes; describe position, direction, movement (including turns).	Identify and describe 2D shapes; identify line symmetry; use mathematical vocabulary to describe position, direction, and movement.	Identify right angles; recognise horizontal, vertical, parallel and perpendicular lines; identify 3D shapes in different orientations.	Classify shapes by properties (including acute/obtuse angles); identify lines of symmetry; complete simple symmetric figures.	Measure/draw angles; identify regular and irregular polygons; use properties of shapes to deduce missing angles; identify 3D shapes from nets.	Draw 2D shapes accurately; build simple 3D shapes; use properties of shapes and angle facts; find angles in triangles/quadrilaterals/polygons; recognise and construct nets.
Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statistic		Interpret and construct simple pictograms, tally charts, block diagrams and tables; ask/answer simple questions.	Interpret and present data using bar charts, pictograms and tables; solve one/two-step problems.	Interpret and present discrete/continuous data using bar charts and time graphs; solve problems using information in tables.	Solve comparison/sum/difference problems using information from line graphs; complete, read and interpret tables.	Interpret and construct pie charts; calculate mean as average; use all forms of data representation to solve problems.