Alverstoke Infant School

Mathematics Curriculum Progression
EYFS (year R) – KS1 (years 1 and 2) – KS2 (year 3)

Concept	YR	Y1	Y2	Y3
Number - Number and Place Value	**Number** Have a deep understanding of number to 10, including the composition of each number Subitise (recognise quantities without counting) up to 5 **Numerical patterns** Verbally count beyond 20, recognising the pattern of the counting system	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 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	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 (tens, ones) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs Read and write numbers to at least 100 in numerals and in words Use place value and number facts to solve problems	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 threedigit number (hundreds, tens, ones) 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 Solve number problems and practical problems involving these ideas

| Number - Addition and Subtraction | **Number** 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.

Numerical patterns Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity | Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs

Represent and use number bonds and related subtraction facts within 20

Add and subtract one-digit and two digit numbers to 20, including zero

solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as

$7 = \boxed{} - 9$ | Solve problems with addition and subtraction:
• using concrete objects and pictorial representations, including those involving numbers, quantities and measures
• 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 using concrete objects, pictorial representations, and mentally, including:

• a two-digit number and ones
• a two-digit number and tens
• two two-digit numbers
• adding three one-digit numbers

Show that addition of two numbers 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 and use this to check calculations and solve missing number problems | 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

Estimate the answer to a calculation and use inverse operations to check answers

Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction |

Number - Multiplication and Division	Numerical patterns Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally	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	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects

Number - Fractions		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, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one digit numbers or quantities by 10 Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Recognise and show, using diagrams, equivalent fractions with small denominators Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7] Compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above

		Quicker, slower, earlier, later 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 [for example, before and after, next, first, today, 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	Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change Compare and sequence intervals of time 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 Know the number of minutes in an hour and the number of hours in a day	Know minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight Know the number of seconds in a minute and the number of days in each month, year and leap year Compare durations of events [for example to calculate the time taken by particular events or tasks]
Geometry – properties of shapes	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can Select, rotate and manipulate shapes to develop spatial reasoning skills	Recognise and name common 2-D and 3-D shapes, including: · 2-D shapes [for example, rectangles (including squares), circles and triangles] · 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, 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]	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them Recognise angles as 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

			compare and sort common 2-D and 3-D shapes and everyday objects	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Geometry – position and direction	Continue, copy and create repeating patterns	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	Order and arrange combinations of mathematical objects in patterns and sequences 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)	Recap Y2 objectives and prepare for Y4 objectives
Statistics		Prepare for Y2 objectives	Interpret and construct simple pictograms, tally charts, block diagrams and simple 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	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