Maths Progression Document
The Oaktree School

	Reception	Year 1	Year 2
Number – number and place value			
Knowledge			
	• Have a deep understanding of number 10, including the composition of each number. • Understand the 'one more than/one less than' relationship between consecutive numbers. • Understand the meaning of greater than, less than or the same as and use this to compare numbers.	• Counting on and back from a given number (within 100) – one more/one less • Counting 1, 2, 3… and ordinal numbers first, second, third… • Count in 2s – identify odd/even numbers • Read and write numbers from 1-20 in numerals and words • Identify and represent numbers using objects and pictorial representations • Identify tens and ones (within 20 and extend to 100 by end of year) • Use the language of: equal to, more than, less than (fewer), most, least • Compare and order numbers up using symbols • Count in multiples of10 • Count in multiples of 5	• Count in steps of 2, 3, 5 and 10 from 0 • Count in 10s from any number, on and back • Identify tens and ones (within 100 and extend by the end of the year) • Represent numbers in different ways • Estimate • Compare and order numbers up to 100 using symbols • Read and write numbers to at least 100 in numerals and words • Partition numbers in different ways (secure knowledge of place value) • Understand 0 as a place holder
Skills			
	• Count objects, actions and sounds • Subitise. • Link the number symbol		• Use place value and number facts to solve problems

	• (numeral) with its cardinal number value. • Count beyond ten. • Compare numbers. • Verbally count beyond 20, recognising the pattern of the counting system		
Number – addition and subtraction			
Knowledge			
	• To begin to know some addition and subtraction facts for numbers up to ten. • To understand that numbers can be added together to make more or taken away to make less.	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods) • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one-digit and two-digit numbers to 20, including zero • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	• 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 •
Skills			
	• Explore the composition of numbers to 10.	• Solve one-step problems that involve addition and	• Recognise and use the inverse relationship between addition

	• Automatically recall number bonds for numbers 0–5 and some to 10.	subtraction, using concrete objects, pictorial representations and missing box problems e.g. 7 = ? – 9 • Memorise and reason with number bond knowledge	and subtraction and use this to check calculations and solve missing number problems. • 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
Number – multiplication and division			
Knowledge			
	• To know evens and odds up to 10, some double facts and to equally distribute quantities.	• Count in multiples of 2, 10 and 5 • Doubling and halving numbers within 20 • Find simple fractions of numbers	• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs •
Skills			

	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	• Through grouping and sharing small quantities, begin to understand concept of multiplication and division, in context • 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 • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts
Number - fractions			
Knowledge			
	• To know that amounts and objects can be shared.	• 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	• *Pupils should count in fractions up to 10, starting from any number and using the1/2 and 2/4 equivalence on the number line (Non-Statutory Guidance)* • Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity • Write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.
Skills			
	• To begin to share objects and shapes.	• Solve problems involving halves and quarters	• Solve problems involving halves, quarters, three-quarters and thirds

Measurement			
Knowledge			
	• To understand that objects can be compared and measured by weight, length and capacity.	• Compare, describe and solve practical problems for: Lengths and heights Mass/weight Capacity/volume Time • Measure and begin to record: Lengths and heights Mass/weight Capacity/volume Time • Recognise and know the value of different denominations of coins and notes • Sequence events in chronological order • Days of the week, weeks, months and years • Tell the time to the hour and half past the hour (draw hands on clock face)	• Compare and order lengths, mass, volume/capacity and record the results using >, < and = • Compare and sequence intervals of time • Choose and use appropriate standard units to estimate and measure **length/height** in any direction (m/cm); **mass** (kg/g); **temperature** (°C); **capacity** (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • Recognise and use symbols for pounds **(£) and pence (p)**; combine amounts to make a particular value • Find different combinations of coins that equal the same amounts of money • 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 the number of minutes

			in an hour and the number of hours in a day.
Skills			
	• Compare length, weight and capacity.		• **Solve simple problems** in a practical context involving addition and subtraction of money of the same unit, including giving change
Geometry – properties of shape			
Knowledge			
	• To know the names of basic shapes • To know the different basic properties of shape.	• Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [e.g. rectangles/oblongs (including squares), circles and triangles] 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. • Recognise common 2-D and 3-D shapes in different orientations • Recognise the shapes of everyday objects	• 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] • Read and write names for shapes
Skills			
	•Select, rotate and manipulate shapes to develop spatial reasoning skills. •Compose and decompose shapes so that children recognise		• Compare and sort common 2-D and 3-D shapes and everyday objects

	a shape can have other shapes within it, just as numbers can.		
Geometry – position and direction			
Knowledge			
	• To understand simple positional and directional language. • To identify simple patterns	• Describe position, direction and movement, including half, quarter and three-quarter turns.	• 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)
Skills			
	• Continue, copy and create repeating patterns • To accurately give and follow simple instructions using position and direction.	• Order and arrange combinations of mathematical objects in **simple** patterns and sequences	• Order and arrange combinations of mathematical objects in patterns and sequences
Statistics			
Knowledge			
		• Construct simple pictograms, block diagrams using information gathered as a class. Cross curricular learning/book week opportunities	• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • Ask and answer 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