Stalyhill Infant School – Long term curriculum plan
Mathematics

	Reception - Number		Reception – Shape, Space & Measure
Number & Place Value	• I can count up to three or four objects by saying one number name for each item. • I can count objects to 10, and begin to count beyond 10. • I can begin to use 'teens' to count beyond 10. • I can count out up to six objects from a larger group. • **I can group objects in 2s.** • I can select the correct numeral to represent 1-5, then 1 to 10 objects. Then 1-30. • I can count an irregular arrangement of up to ten objects. • I can find one more or one less from a group of up to five objects, then ten objects. • I can use the language of 'more' and 'fewer' to compare two sets of objects. • I fully understand 5,6,7 etc. and all manipulations of the number. • **I can use manipulatives and songs to begin to understand bonds to 10** • **I understand the concept of ones.** • **I am beginning to understand that 2-digit numbers are made up of tens and ones.**	**Measurement**	• I can talk about the routine of the day and use language like before, after. • **I can sequence events in order.** • I can use comparative language like taller, shorter, the same. • I can experiment with length, height, capacity and use my findings to order and group items. • I can identify money and I can start to use money in my play. • I can recall routines and start to relate them to the time on the clock.
Calculations	• I can recognise some numerals of personal significance. • **I can estimate the number of objects in 2 groups and check the total by counting.** • I can find the total number of items in two groups by counting all of them and starting to use 'counting on'. • I can begin to use the vocabulary involved in adding and subtracting including counting on and back. • I understand addition up to 5 using all combinations. Then 6, 7, 8, 9, 10 • **I can add & subtract two single digit numbers using manipulatives.**	**Geometry – properties of shape**	• I can start to identify shapes in the environment • I can start to find appropriate shapes for certain tasks. • I can ask questions about my observations of differences and similarities. • I can recall names for 2D and 3D shapes and I can use some of the terms to describe their properties. • I can order and sort according to simple properties.

Fractions	• I can show some understanding of doubling and halving in familiar contexts • **I understand the concept of half**	**Geometry – position & direction**	• I can start to make more meaningful pictures, patterns and arrangements with shapes. • I can notice similarities, differences, patterns and changes. • I can use the language of direction when using programmable toys.
Goal	• **I can count reliably with numbers from 1-30, place them in order and say which number is one more or one less than a given number.** • **I can use quantities and objects to add and subtract two single-digit numbers and count on or back to find the answer.** • **I can solve problems, including doubling, halving and sharing.**	**Goal**	• **I can use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.** • **I can recognise, create and describe patterns.** • **I can explore characteristics of everyday objects and shapes and use mathematical language to describe them.**

	Year 1	**Year 2**
Number & Place Value	• I can count to and across 100, forward and backwards beginning with 0 or 1 from any number. • I can count in multiples of 2, 5 and 10. • I can count, read and write numbers to 100 in numerals. • I can say what is one more or one less than any number. • I can read and write numbers from 1 to 20 in numerals and words. • I can 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. • **I understand that 2-digit numbers are made up of tens and ones.** • **I can recognise the place value of each digit in a 2-digit number.**	• I can count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward. • I can read and write numbers to at least 100 in numerals and in words. • I can compare and order numbers from 0 up to 100; using < > = signs. • I confidently recognise the place value of each digit in a 2-digit number. • I can identify, represent and estimate numbers using different representations, including the number line. • I can use place value and number facts to solve problems.

Calculations	• I can represent and use number bonds and related subtraction facts to 20.
	• I can add and subtract 1-digit and 2-digit numbers to 20, including zero.
	• I can add any three 1-digit numbers with a total up to 20.
	• I can read, write and interpret mathematical statements involving addition, subtraction and equals signs.
	• I can solve one-step problems that involve addition and subtraction, using objects and pictorial representations.
	• I can solve missing number problems.
	• I can solve one-step problems involving multiplication and division, by using concrete objects, pictorial representations and arrays.
	• **I can begin to recall and use multiplication and division facts for 2, 5 & 10 times tables.**
		• I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
		• I can add and subtract mentally, including:
		  ➢ A 2-digit number and ones
		  ➢ A 2-digit number and tens
		  ➢ Two 2-digit numbers
		  ➢ Adding three 1-digit numbers
		• I can add and subtract numbers using concrete objects and pictorial representations, including:
		  ➢ A 2-digit number and ones
		  ➢ A 2-digit number and tens
		  ➢ Two 2-digit numbers
		  ➢ Adding three 1-digit numbers
		• I recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.
		• I can solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.
		• I can solve problems with addition and subtraction applying my increasing knowledge of mental and written methods.

		• I can recall and use multiplication and division facts for the 2, 5 and 10x tables, including recognising odd and even numbers. • I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication, division and equals signs. • I can solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context. • I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.
Fractions	• I can recognise, find and name a half of an object, shape or quantity. • I can recognise, find and name a quarter of an object, shape or quantity.	• I recognise, find, name and write fractions 1/2, 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. • I can write simple fractions. • I recognise the equivalence of 2/4 and 1/2.
Measurement	• I can compare, describe and solve practical problems for lengths and heights; mass/weight; capacity and volume; and time. • I can measure and begin to record lengths and heights; mass/weight; capacity and volume; and time. • I recognise and know the value of different denominations of coins and notes. • I can tell the time to the hour. • I can tell the time to half past the hour. • I can draw hands on a clock face to show these times. • I can sequence events in chronological order using language. • I recognise and use language relating to dates, including days, weeks, months and years	• I can compare and order lengths, mass, volume/capacity and record the results using > < and =. • I can choose and use standard units to estimate and measure length/height in any direction in m and cm using rulers. • I can choose and use standard units to estimate and measure mass in kg and g using scales. • I can choose and use standard units to estimate and measure temperature in °C using thermometers. • I can choose and use standard units to estimate and measure capacity in l and ml using measuring vessels. • I recognise and use symbols for £ and p and combine amounts to make a particular value. • I can find different combinations of coins that equal the same amount of money. • I can tell and write the time to five minutes, including quarter to/past and draw the hands on a clock face to show these times. • I can compare and sequence intervals of time. • I know the number of minutes in an hour. • I know the number of hours in a day. • I can solve simple problems in a practical context involving addition and subtraction of money of the same units, including giving change.
Geometry – properties of shape	• I recognise and can name common 2D shapes (rectangles, including squares, circles and triangles. • I recognise and can name common 3D shapes (cuboids, including cubes, pyramids and spheres.	• I can compare and sort common 2D shapes and everyday objects. • I can compare and sort common 3D shapes and everyday objects. • I can identify and describe the properties of 2D shapes, including the number of sides and line of symmetry in a vertical line. • I can identify and describe the properties of 3D shapes including the number of edges, vertices and faces. • I can identify 2D shapes on the surface of 3D shapes.

Geometry – position & direction	• I can describe position, directions and movement, including half, quarter and three-quarter turns.	• I can order and arrange combinations of mathematical objects in patterns and sequences. • I can 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).
Statistics	No content	• I can interpret and construct simple pictograms. • I can interpret and construct tally charts. • I can interpret and construct block diagrams. • I can interpret and construct simple tables. • I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. • I can ask and answer questions about totaling and comparing categorical data.