



Overstone Combined School

KS1 Maths progression

	EYFS	Year 1	Year 2
	<p>The national curriculum for mathematics aims to ensure that all pupils:</p> <ul style="list-style-type: none"> ▪ Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. ▪ Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. ▪ Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. 		
Number – Number & Place Value	<p>Pupils can:</p> <ul style="list-style-type: none"> ● recognise some numerals of personal significance ● recognises numerals 1 to 5 ● counts up to three or four objects by saying one number name for each item ● counts actions or objects which can't be moved ● counts objects to 10, & beginning to count beyond 10 ● Counts out up to six objects from a larger group ● Selects the correct numeral to represent 1 to 5, then 1 to 10 objects ● Counts an irregular arrangement of up to 10 objects ● estimates how many objects they can see and checks by counting them ● uses the language of more and fewer to compare two sets of objects 	<p>Pupils can:</p> <ul style="list-style-type: none"> ● 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 one more and one less than a given number, ● 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 <p>read and write numbers from 1 to 20 in numerals and words.</p>	<p>Pupils can:</p> <ul style="list-style-type: none"> ● 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.
	<p>Vocabulary: Number one, two, three to twenty and beyond, none count on/up/to/from/down, before, after, more, less, many, few, fewer, fewest, smaller, smallest, equal to, the same as, odd, even, digit, numeral, compare, order, size, value, between, halfway, between.</p>	<p>Vocabulary: Greater, lesser, pairs, units, ones, tens, ten more/less, figure (s) in order/ A different order, above, below.</p>	<p>Vocabulary: Numbers to one hundred, hundreds, partition, recombine, hundred more/less.</p>

Number –
Addition and Subtraction

Pupils can:

- finds the total number of items in two groups by counting all of them
- In practical activities and discussion, beginning to use the vocabulary involved in adding & subtracting.
- begins to identify own mathematical problems based on own interests & fascinations
- using quantities & objects, they add & subtract two single-digit numbers & count on or back to find the answer.

Vocabulary:
Number line, add, more, plus, make, sum, total, altogether, double, half, halve, equals, is the same (including equals sign)
How many more to make...? How many more is... then ...?
How much more is...? Subtract, take away, minus

Pupils can:

- 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 $7 = - 9$.

Vocabulary:
Number bond, inverse, near, doubles, difference between. How many fewer is...than...? How much less is...?

Pupils can:

- 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.

Vocabulary:
Add, more, plus, make, sum, total, altogether, subtract, minus, leave, less, take away, differences between.

Number – Multiplication and Division	<p>Pupils can:</p> <ul style="list-style-type: none"> Solve problems, including doubling, halving & sharing. 	<p>Pupils can:</p> <ul style="list-style-type: none"> 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. 	<p>Pupils can:</p> <ul style="list-style-type: none"> 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 (\times), division (\div) 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.
	<p>Vocabulary: Odd, even, double, halve, share, share equally, group in pairs, equal groups of, divide.</p>	<p>Vocabulary: Once, twice, three times, five times, count in tens (forwards from/ backwards from) How many times? Lots of, groups of, multiple of, times, multiply, multiply by, repeated addition, array, row, column group in twos, threes, etc divided.</p>	<p>Vocabulary: Multiply, times, recall, recognise numbers, commutative, groups of, lots of, repeated addition, product, multiply by, array, divide, divided by, divided into, share, share equally, equal groups of.</p>
Number – Fractions		<p>Pupils can:</p> <ul style="list-style-type: none"> 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. 	<p>Pupils can:</p> <ul style="list-style-type: none"> 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 for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.
	<p>Vocabulary:</p>	<p>Vocabulary: Whole, equal, one half, equal parts, four equal parts, two halves, a quarter, two quarters.</p>	<p>Vocabulary: Three quarters, once third, a third, equivalence, equivalent.</p>

Pupils can:

- Orders two or three items by length or height.
- Orders two items by weight or capacity
- Uses everyday language related to time
- Beginning to use everyday language related to money
- Orders & sequences familiar events
- Measures short periods of time in simple ways.

Pupils can:

- compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
- mass/weight [for example, heavy/light, heavier than, lighter than]
- capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
- time [for example, quicker, slower, earlier, later]
- measure and begin to record lengths, 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.

Pupils can:

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$
- 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
- 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.

Vocabulary:

Full, half, empty, hold, container. weigh, weighs, balance. heavy, heavier, heaviest, light, lighter, lightest, scales, time, days of the week: Monday, Tuesday etc. Seasons: Spring, Summer, Autumn, Winter Days, week, month, year, weekend Birthday, holiday, morning, afternoon, evening, night bedtime, dinnertime, playtime, today, yesterday, tomorrow, before, after, next, last quickest, fastest, slowest, clock, once, first, second, third, estimate, too many, too few Length, height, longer, longest, shorter, shortest, taller, tallest, higher, highest, money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, How much? How many? Total.

Vocabulary:

Midnight, now, soon, early, late, quick, quicker, quickly, fast, slow, slower, old, older, oldest, new, newer, newest, takes longer, takes less time, hour, o'clock, half past, watch, hands, how long ago? How long will it be to...? How long will it take to...? How often? Always, never, often, sometimes, usually once, twice, first, second, third, etc, close to, about the same as, just over, just under, enough, not enough, width, depth, long, short, tall, high, low, wide, narrow, deep, shallow, thick, thin, far, near, close, metre, ruler, metre stick, costs more, costs less, dear(er), cheaper, costs, the same as.

Vocabulary:

Quarter, past/to, mm, cm, km, grams, kilograms, ml, litres, temperature (degrees).

Geometry – Properties of shape	<p>Pupils can:</p> <ul style="list-style-type: none"> Beginning to use mathematical names for ‘solid’ 3D shapes and ‘flat’ 2D shapes, & mathematical terms to describe shapes Selects a particular named shape Uses familiar objects & common shapes to create & recreate patterns & build models <p>ELG: Children use:</p> <ul style="list-style-type: none"> everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems They recognise, create & describe patterns. They explore characteristics of everyday objects & shapes. 	<p>Pupils can:</p> <ul style="list-style-type: none"> 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]. 	<p>Pupils can:</p> <ul style="list-style-type: none"> 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] compare and sort common 2-D and 3-D shapes and everyday objects.
	<p>Vocabulary: Sort, cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square Shape, flat, curved, straight, round Solid Corner Face, side, make, build, draw, sort, cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square Shape, flat, curved, straight, round, solid, corner, face, side, make, build, draw.</p>	<p>Vocabulary: Group, hollow, point, pointed, edge.</p>	<p>Vocabulary: Size, bigger, larger, smaller, symmetrical line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern.</p>
Geometry – Position and Direction	<p>Pupils can:</p> <ul style="list-style-type: none"> Can describe their relative position such as ‘behind’ or ‘next to’. 	<p>Pupils can:</p> <ul style="list-style-type: none"> describe position, direction and movement, including whole, half, quarter and three-quarter turns. 	<p>Pupils can:</p> <ul style="list-style-type: none"> 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 anticlockwise)
	<p>Vocabulary: Over, under, underneath, above, below, top, bottom, side On, in, outside, inside, in front, behind, front, back, before, after, beside, next to, middle, up, down, forwards, backwards, sideways, close, far, through, towards, away from, side, roll, turn</p>	<p>Vocabulary: Position, around, opposite, apart, between, edge, centre, corner, direction, journey, left, right, across, near, along, to, from, movement, whole turn, half turn, stretch, bend.</p>	<p>Vocabulary: Rotation, clockwise, anticlockwise, straight line, ninety degrees turn, right angle.</p>

General problem solving

Vocabulary:

Listen, join in, say, think, imagine, remember, start from, look at, point to, put, what comes next? Find, use, make, build, tell me, describe, pick out, talk about, explain, show me, read, write, tick, draw a line, ring, cost, count, work out, number line, number track, number square, number cards, counters, cubes, blocks, die, dice, dominoes, pegs, peg board, same way, different way, in order, in a different order

Vocabulary:

Place, fit, arrange, rearrange change, change over, split, separate, carry on, continue, repeat, choose, collect, record, trace, copy, complete, finish, end, fill in, shade, colour, cross, draw, draw a line between, join (up), arrow, answer, check, same number(s), different number(s), missing number(s) number facts, abacus, rods, best way, another way, not all, every, each

Vocabulary:

Count, tally, sort, vote, graph, block graph, pictogram, represent, group, set, list, table, label, title, most/least popular, most/least common.