

# Year 6 Maths Curriculum

## Number – Number and Place Value

- ❖ read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit
- ❖ 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
- ❖ round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
- ❖ solve number problems and practical problems that involve all of the above
- ❖ read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

## Number – Addition and Subtraction

- ❖ add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- ❖ add and subtract numbers mentally with increasingly large numbers
- ❖ use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- ❖ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

## Number – Multiplication and Division

- ❖ multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- ❖ divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- ❖ divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- ❖ perform mental calculations, including with mixed operations and large numbers
- ❖ identify common factors, common multiples and prime numbers
- ❖ use their knowledge of the order of operations to carry out calculations involving the four operations

## Number – Multiplication and Division Cont.

- ❖ use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- ❖ compare and order fractions, including fractions  $> 1$
- ❖ add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- ❖ multiply simple pairs of proper fractions, writing the answer in its simplest form
- ❖ divide proper fractions by whole numbers
- ❖ associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction
- ❖ identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
- ❖ multiply one-digit numbers with up to two decimal places by whole numbers
- ❖ use written division methods in cases where the answer has up to two decimal places
- ❖ solve problems which require answers to be rounded to specified degrees of accuracy
- ❖ recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

## Measurement

- ❖ solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
- ❖ use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
- ❖ convert between miles and kilometres
- ❖ recognise that shapes with the same areas can have different perimeters and vice versa
- ❖ recognise when it is possible to use formulae for area and volume of shapes
- ❖ calculate the area of parallelograms and triangles
- ❖ calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units [for example, mm<sup>3</sup> and km<sup>3</sup>].

## Geometry – Properties of Shape

- ❖ draw 2-D shapes using given dimensions and angles
- ❖ recognise, describe and build simple 3-D shapes, including making nets
- ❖ compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
- ❖ illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- ❖ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

## Geometry – Position and Direction

- ❖ describe positions on the full coordinate grid (all four quadrants)
- ❖ draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

## Statistics

- ❖ interpret and construct pie charts and line graphs and use these to solve problems
- ❖ calculate and interpret the mean as an average.

## Ratio and Proportion

- ❖ solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
- ❖ solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
- ❖ solve problems involving similar shapes where the scale factor is known or can be found
- ❖ solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

## Algebra

- ❖ use simple formulae
- ❖ generate and describe linear number sequences
- ❖ express missing number problems algebraically
- ❖ find pairs of numbers that satisfy an equation with two unknowns
- ❖ enumerate possibilities of combinations of two variables.

# Year 5 Maths Curriculum

## Number – Number and Place Value

- ❖ 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
- ❖ use negative numbers in context, and calculate intervals across zero
- ❖ solve number and practical problems that involve all of the above.

## Number – Addition and Subtraction

- ❖ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- ❖ perform mental calculations, including with mixed operations and large numbers
- ❖ use their knowledge of the order of operations to carry out calculations involving the four operations
- ❖ solve problems involving addition, subtraction, multiplication and division
- ❖ determine, in the context of a problem, an appropriate degree of accuracy.

## Number – Multiplication and Division

- ❖ multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- ❖ divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- ❖ divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- ❖ perform mental calculations, including with mixed operations and large numbers
- ❖ identify common factors, common multiples and prime numbers
- ❖ use their knowledge of the order of operations to carry out calculations involving the four operations
- ❖ solve problems involving addition, subtraction, multiplication and division
- ❖ use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

## Number – Multiplication and Division Cont.

- ❖ solve problems involving addition, subtraction, multiplication and division
- ❖ use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

## Number – Fractions

- ❖ compare and order fractions whose denominators are all multiples of the same number
- ❖ identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- ❖ recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements  $> 1$  as a mixed number
- ❖ add and subtract fractions with the same denominator and denominators that are multiples of the same number
- ❖ multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- ❖ read and write decimal numbers as fractions
- ❖ recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- ❖ round decimals with two decimal places to the nearest whole number and to one decimal place
- ❖ read, write, order and compare numbers with up to three decimal places
- ❖ solve problems involving number up to three decimal places
- ❖ recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal
- ❖ solve problems which require knowing percentage and decimal equivalents  $\frac{1}{2}$   $\frac{1}{4}$   $\frac{1}{5}$   $\frac{2}{5}$   $\frac{4}{5}$  and those fractions with a denominator of a multiple of 10 or 25.

## Geometry – Position and Direction

- ❖ identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

## Measurement

- ❖ convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- ❖ understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- ❖ measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- ❖ calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes
- ❖ estimate volume [for example, using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]
- ❖ solve problems involving converting between units of time
- ❖ use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

## Geometry – Properties of Shapes

- ❖ identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- ❖ know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- ❖ draw given angles, and measure them in degrees (°)
- ❖ identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and half a turn (total 180°), other multiples of 90°
- ❖ use the properties of rectangles to deduce related facts and find missing lengths and angles
- ❖ distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

## Statistics

- ❖ solve comparison, sum and difference problems using information presented in a line graph
- ❖ complete, read and interpret information in tables, including timetables.

# Year 4 Maths Curriculum

## Number – Number and Place Value

- ❖ 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 (thousands, hundreds, tens, and ones)
- ❖ order and compare numbers beyond 1000
- ❖ identify, represent and estimate numbers using different representations
- ❖ round any number to the nearest 10, 100 or 1000
- ❖ solve number and practical problems that involve all of the above and with increasingly large positive numbers
- ❖ 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.

## Number – Addition and Subtraction

- ❖ add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- ❖ estimate and use inverse operations to check answers to a calculation
- ❖ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

## Number – Multiplication and Division

- ❖ recall multiplication and division facts for multiplication tables up to  $12 \times 12$
- ❖ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- ❖ recognise and use factor pairs and commutativity in mental calculations
- ❖ multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- ❖ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

## Number – Fractions

- ❖ recognise and show, using diagrams, families of common equivalent fractions
- ❖ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- ❖ solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- ❖ add and subtract fractions with the same denominator
- ❖ recognise and write decimal equivalents of any number of tenths or hundredths
- ❖ recognise and write decimal equivalents to  $\frac{1}{2}$ ,  $\frac{1}{4}$  and  $\frac{3}{4}$
- ❖ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
- ❖ round decimals with one decimal place to the nearest whole number
- ❖ compare numbers with the same number of decimal places up to two decimal places
- ❖ solve simple measure and money problems involving fractions and decimals to two decimal places.

## Measurement

- ❖ convert between different units of measure [for example, kilometre to metre; hour to minute]
- ❖ measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- ❖ find the area of rectilinear shapes by counting squares
- ❖ estimate, compare and calculate different measures, including money in pounds and pence
- ❖ read, write and convert time between analogue and digital 12- and 24-hour clocks
- ❖ solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

## Geometry – Properties of Shape

- ❖ compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- ❖ identify acute and obtuse angles and compare and order angles up to two right angles by size
- ❖ identify lines of symmetry in 2-D shapes presented in different orientations
- ❖ complete a simple symmetric figure with respect to a specific line of symmetry.

## Geometry – Position and Direction

- ❖ describe positions on a 2-D grid as coordinates in the first quadrant
- ❖ describe movements between positions as translations of a given unit to the left/right and up/down
- ❖ plot specified points and draw sides to complete a given polygon.

## Statistics

- ❖ interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- ❖ solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

# Year 3 Maths Curriculum

## Number – Number and Place Value

- ❖ 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 (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

- ❖ 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

- ❖ 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

- ❖ 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
- ❖ compare and order unit fractions, and fractions with the same denominators
- ❖ solve problems that involve all of the above.

## Measurement

- ❖ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- ❖ measure the perimeter of simple 2-D shapes
- ❖ add and subtract amounts of money to give change, using both £ and p in practical contexts
- ❖ tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
- ❖ estimate and read time to the nearest minute; record and compare time in terms of seconds, 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

## Geometry – Properties of Shape

- ❖ 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
- ❖ identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

## Statistics

- ❖ 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.

# Year 2 Maths Curriculum

## Number – Number and Place Value

- ❖ 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.

## Number – Addition and Subtraction

- ❖ 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.

## Number – Multiplication and Division

- ❖ 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.

## Number – Fractions

- ❖ recognise, find, name and write fractions  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$ .
- ❖ write simple fractions for example,  $\frac{1}{2}$  of 6 = 3 and recognise the equivalence of  $\frac{1}{2}$  and  $\frac{2}{4}$ .

## Measurement

- ❖ 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.

## Geometry – Properties of Shape

- ❖ 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.

## Geometry – Position and Direction

- ❖ 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).

## Statistics

- ❖ 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.

# Year 1 Maths Curriculum

## Number – 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
- ❖ 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.

## Number – Addition and Subtraction

- ❖ 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  $7 = \square - 9$ .

## Number – Multiplication and Division

- ❖ 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.

## 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.

## Measurement

- ❖ 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 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.

## Geometry – Properties of Shape

- ❖ 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].

## Geometry – Position and Direction

- ❖ describe position, direction and movement, including whole, half, quarter and three-quarter turns.

# Reception Maths Curriculum

During EYFS (Nursery and Reception) children make progress across age-related developmental bands. By the end of Reception, the expectation is that children will be secure at the Early Learning Goal (ELG)

## 30-50 months – Number

- ❖ Uses some number names and number language spontaneously.
- ❖ Uses some number names accurately in play.
- ❖ Recites numbers in order to 10.
- ❖ Knows that numbers identify how many objects are in a set.
- ❖ Beginning to represent numbers using fingers, marks on paper or pictures.
- ❖ Sometimes matches numeral and quantity correctly.
- ❖ Show curiosity about numbers by offering comments or asking questions.
- ❖ Compares two groups of objects, saying when they have the same number.
- ❖ Shows an interest in number problems.
- ❖ Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.
- ❖ Shows an interest in numerals in the environment.
- ❖ Shows an interest in representing numbers.
- ❖ Realises not only objects but anything can be counted, including steps, claps or jumps.

## 40-60 months – Number

- ❖ Recognises 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 cannot be moved.
- ❖ Counts objects to 10, and 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 ten objects.
- ❖ Estimates how many objects they can see and checks by counting them.
- ❖ Uses the language of 'more' or 'fewer' to compare two sets of objects.
- ❖ Finds the total number of items in two groups by counting all of them.
- ❖ Says the number that is one more than a given number.
- ❖ Finds one more or one less from a group of up to five objects, then ten objects.
- ❖ In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- ❖ Records, using marks that they can interpret and explain.
- ❖ Begins to identify own mathematical problems based on own interests and fascinations.

## Early Learning Goal (ELG) – Number

- ❖ Children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number.
- ❖ Using quantities and objects, they add and subtract two single digit numbers and count on or back to find the answer. They solve problems including doubling, halving and sharing.

## Exceeding Early Learning Goal – Number

- ❖ Estimates a number of objects and check quantities by counting up to 20.
- ❖ Solves practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups.

## 30-50 months – Shape, Space and Measure

- ❖ Shows an interest in shape and space by playing with shapes or making arrangements with objects.
- ❖ Shows awareness of similarities of shapes in the environment.
- ❖ Uses positional language.
- ❖ Shows interest in shape by sustained construction activity or by talking about shapes or arrangements.
- ❖ Shows interest in shapes in the environment.
- ❖ Uses shapes appropriately for tasks.
- ❖ Beginning to talk about the shapes of everyday objects e.g. 'round' and 'tall'.

## 40-60 months – Shape, Space and Measure

- ❖ Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.
- ❖ Selects a particular named shape.
- ❖ Can describe their relative position such as 'behind' or 'next to'.
- ❖ Orders two or three items by length or height.
- ❖ Orders two items by weight or capacity.
- ❖ Uses familiar objects and common shapes to create and recreate patterns and build models.
- ❖ Uses everyday language related to time.
- ❖ Beginning to use everyday language related to money.
- ❖ Orders and sequences familiar events.
- ❖ Measures short periods of time in simple ways.

## Early Learning Goal (ELG) – Shape, Space and Measure

- ❖ Children use 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 and describe patterns.
- ❖ They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

## Exceeding Early Learning Goal – Shape, Space and Measure

- ❖ Estimates objects.
- ❖ Measures objects.
- ❖ Weighs objects.
- ❖ Compares objects.
- ❖ Orders objects.
- ❖ Talks about properties, position and time.

# Nursery Maths Curriculum

During EYFS (Nursery and Reception) children make progress across age-related developmental bands.

By the end of Nursery, the expectation is that children will be secure at 30-50 months.

## 22-36 months – Number

- ❖ Selects a small number of objects from a group when asked.
- ❖ Recites some number names in sequence.
- ❖ Creates and experiments with symbols and marks representing ideas of number.
- ❖ Begins to make comparisons between quantities.
- ❖ Uses some language of quantities such as 'more' and 'a lot'.
- ❖ Knows that a group of things changes in quantity when something is added or taken away.

## 30-50 months – Number

- ❖ Uses some number names and number language spontaneously.
- ❖ Uses some number names accurately in play.
- ❖ Recites numbers in order to 10.
- ❖ Knows that numbers identify how many objects are in a set.
- ❖ Beginning to represent numbers using fingers, marks on paper or pictures.
- ❖ Sometimes matches numeral and quantity correctly.
- ❖ Show curiosity about numbers by offering comments or asking questions.
- ❖ Compares two groups of objects, saying when they have the same number.
- ❖ Shows an interest in number problems.
- ❖ Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.
- ❖ Shows an interest in numerals in the environment.
- ❖ Shows an interest in representing numbers.
- ❖ Realises not only objects but anything can be counted, including steps, claps or jumps.

## 40-60 months – Number

- ❖ Recognises 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 cannot be moved.
- ❖ Counts objects to 10, and 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 ten objects.
- ❖ Estimates how many objects they can see and checks by counting them.
- ❖ Uses the language of 'more' or 'fewer' to compare two sets of objects.
- ❖ Finds the total number of items in two groups by counting all of them.
- ❖ Says the number that is one more than a given number.
- ❖ Finds one more or one less from a group of up to five objects, then ten objects.
- ❖ In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- ❖ Records, using marks that they can interpret and explain.
- ❖ Begins to identify own mathematical problems based on own interests and fascinations.

## 22-36 months – Shape, Space and Measure

- ❖ Notices simple shapes and patterns in pictures.
- ❖ Beginning to categorise objects according to properties such as shape or size.
- ❖ Begins to use the language of size.
- ❖ Understands some talk about immediate past and future e.g. 'before' 'later' and 'soon'.
- ❖ Anticipates specific time-based events such as mealtimes or home time.

## 30-50 months – Shape, Space and Measure

- ❖ Shows an interest in shape and space by playing with shapes or making arrangements with objects.
- ❖ Shows awareness of similarities of shapes in the environment.
- ❖ Uses positional language.
- ❖ Shows interest in shape by sustained construction activity or by talking about shapes or arrangements.
- ❖ Shows interest in shapes in the environment.
- ❖ Uses shapes appropriately for tasks.
- ❖ Beginning to talk about the shapes of everyday objects e.g. 'round' and 'tall'.

## 40-60 months – Shape, Space and Measure

- ❖ Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.
- ❖ Selects a particular named shape.
- ❖ Can describe their relative position such as 'behind' or 'next to'.
- ❖ Orders two or three items by length or height.
- ❖ Orders two items by weight or capacity.
- ❖ Uses familiar objects and common shapes to create and recreate patterns and build models.
- ❖ Uses everyday language related to time.
- ❖ Beginning to use everyday language related to money.
- ❖ Orders and sequences familiar events.
- ❖ Measures short periods of time in simple ways.