Year 1 Yearly Overview

Number – number and place value

Statutory requirements

Pupils should be taught to:

- 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.

Notes and guidance (non-statutory)

Pupils practise counting (1, 2, 3…), ordering (for example, first, second, third…), and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent.

Pupils begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations.

They practise counting as reciting numbers and counting as enumerating objects, and counting in twos, fives and tens from different multiples to develop their recognition of patterns in the number system (for example, odd and even numbers), including varied and frequent practice through increasingly complex questions.

They recognise and create repeating patterns with objects and with shapes.

Working within 20 – number, place value, addition and subtraction:

- Understanding and explaining the digits 11 – 19 in terms of quantity, position expressed on a number line and representation of the digits
- Use knowledge of '10 and a bit' to solve problems
- Odd and even numbers within 20
- Doubling and halving

Objectives covered as main sessions in Autumn 1 unit - Number and place value within 10 (following WRM small steps)

Counting and unitising:

- Count within 100 in different ways
- Count efficiently in groups of two
- Count efficiently in groups of ten
- Count efficiently in groups of five
- Count efficiently by counting in groups of two, five and ten

Mastering number:

Strand 1 – explore linear number system looking at range of ordinal representations; composition of numbers within 10 (emphasis on 5 and a bit, 6, 7, 8 and 9); composition of odd and even numbers.
Strand 2 –linear number system; explore composition of numbers within 10 (focus on 7-9); comparing according to different attributes including numerosity.
Strand 3 - composition of numbers within 10 (linked to part-whole model); compare numbers within 10 ; use the inequality symbols to create expressions; reason about inequalities drawing on knowledge of the number system.
Strand 4 – linear number system; explore the use of 'midpoints' to enable pupils to identify the location of other numbers; composition of odd and even numbers (linking to doubles and near doubles);
Strand 5 – linear number system to 20 looking at a range of representations; explore the use of 'midpoints'; explore representations which expose the composition of numbers within 20; compare numbers within 20 using symbols <,>, or +.
Strand 6 – apply knowledge of composition of numbers; draw on knowledge of the relative size of numbers when comparing numbers using inequality symbols.

1NPV-1 Count within 100, forwards and backwards, from any number
1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =
1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.

Number – addition and subtraction

Statutory requirements

Pupils should be taught to:

- 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.

Notes and guidance (non-statutory)

Pupils memorise and reason with number bonds to 10 and 20 in several forms (for example, 9 + 7 = 16; 16 – 7 = 9; 7 = 16 – 9). They should realise the effect of adding or subtracting zero. This establishes addition and subtraction as related operations.

Pupils combine and increase numbers, counting forwards and backwards.

They discuss and solve problems in familiar practical contexts, including using quantities. Problems should include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enabled to use these operations flexibly.

Mastering Number:
Strands 1,& 2– develop knowledge of composition of number bonds with 10
Strands 3 & 4 – develop recall of number bonds within 10
Strand 5 – develop fluency in additive relationships within 10; draw on knowledge of composition of numbers to complete written equations
Strand 6 – recall additive facts within 20, applying knowledge and composition of numbers within 20 and strategies within 10

Additive Structures (1):
- read, write and interpret mathematical statements involving addition and equals signs
- add one-digit numbers (to 10) including zero
- solve one-step problems that involve addition and missing number problems such as 8 = 3 + __

Additive Structures (2):
- read, write and interpret mathematical statements involving subtraction and equals signs
- subtract one-digit numbers (to 10) including zero
- solve one-step problems that involve subtraction and missing number problems such as 7 = ___ - 5

Addition and Subtraction Facts within 10:
- Understand and explain that addition is commutative
- Find pairs of numbers up to 10
- Add and subtract one from any number
- Explain what the difference is between two consecutive numbers
- Understand and explain what happens when 2 is added to or subtracted from odd and even numbers
- Understand and explain what the difference is between consecutive odd and even numbers
- Understand and explain what happens when zero is added to or subtracted from a number
- Understand and explain what happens when a number is added to or subtracted from itself

Working within 20 – number, place value, addition and subtraction:
- Use knowledge of addition facts within 10 to add within 20
- Use knowledge of subtraction facts within 10 to subtract within 20
- Use knowledge of addition and subtraction facts within 10 to add and subtract within 20

1NF-1 Develop fluency in addition and subtraction to 10
1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.
1AS-2 Read, write and interpret equations containing addition ( ), subtraction ( ) and equals ( ) symbols, and relate additive expressions and equations to real-life contexts.

Number – multiplication and division

Statutory requirements

Pupils should be taught to:

- 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.

Notes and guidance (non-statutory)

Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities.

They make connections between arrays, number patterns, and counting in twos, fives and tens.

Counting and unitising:

- Count efficiently in groups of two
- Count efficiently in groups of ten
- Count efficiently in groups of five
- Count efficiently by counting in groups of two, five and ten

Multiplication and division:

- Make equal groups
- Add equal groups
- Make arrays
- Make doubles
- Make equal groups – grouping
- Make equal groups - sharing

1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.

Number – fractions

Statutory requirements

Pupils should be taught to:

- 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.

Notes and guidance (non-statutory)

Pupils are taught half and quarter as 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities. For example, they could recognise and find half a length, quantity, set of objects or shape. Pupils connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole.

Fractions:

- Find a half of shapes and sets of objects
- Find a half of quantities
- Find a quarter of a shape or object
- Find a quarter of a quantity

Measurement

Statutory requirements

Pupils should be taught to:

- 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.

Notes and guidance (non-statutory)

The pairs of terms: mass and weight, volume and capacity, are used interchangeably at this stage.

Pupils move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units.

In order to become familiar with standard measures, pupils begin to use measuring tools such as a ruler, weighing scales and containers.

Pupils use the language of time, including telling the time throughout the day, first using o'clock and then half past.

Measurement:

- Measure length
- Compare items using length and height
- Measure weight/mass
- Measure volume/capacity
- Compare items using weight/mass and volume/capacity

Coin Recognition:

- Understand the value of a 1p coin in pence
- Recognise and explain the value of 2p, 5p and 10p coins
- Understand that a single coin can be worth several pennies
- Use knowledge of the value of coins to solve problems
- Calculate the total value of the coins in a set of 2p coins
- Calculate the total value of the coins in a set of 5p coins
- Calculate the total value of the coins in a set of 10p coins
- Compare sets of 2p, 5p and 10p coins
- Relate what they have learnt to a real-life context
- Work out how many coins are needed to make a value of 10p
- Work out how many coins are needed to make a total value of 20p
- Use knowledge of the value of coins to solve problems

Time:

- Before and after
- Dates
- Time to the hour
- Time to the half hour
- Writing time
- Comparing time

Geometry – properties of shapes

Statutory requirements

Pupils should be taught to:

- 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].

Notes and guidance (non-statutory)

Pupils handle common 2-D and 3-D shapes, naming these and related everyday objects fluently. They recognise these shapes in different orientations and sizes, and know that rectangles, triangles, cuboids and pyramids are not always similar to each other.

Recognise, compose, decompose and manipulate 2D and 3D shapes:

- Explore, discuss and compare 3D shapes
- Investigate ways that four cubes can be composed into different 3D models
- Identify 2D shapes within 3D shapes
- Explore, discuss and compare 2D shapes
- Explore, discuss and identify circles and shapes that are not circles
- Explore, discuss and identify triangles and shapes that are not triangles
- Explore, discuss and identify rectangles (including squares)
- Compose pattern block images
- Copy, extend and develop repeating and radiating pattern block patterns
- Compose tangram images

Geometry – position and direction

Statutory requirements

Pupils should be taught to:

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

Notes and guidance (non-statutory)

Pupils use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.

Pupils make whole, half, quarter and three-quarter turns in both directions and connect turning clockwise with movement on a clock face.

Position and Direction:

- Describe turns: full, half, quarter and three-quarter
- Describe position: left, right, forwards, backwards
- Describe position: top, bottom, in between, above and below

1G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.
1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.