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.

Measurement

- 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
- 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.

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.

Geometry - Properties of shapes

- 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).

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 (×), division (÷) 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.

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.

Number- Fractions

- 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 two quarters and one half.

Vocabulary

Forwards, backwards, increase, decrease, hundreds, tens, ones/units, greater than >, less than <, order, in between, equals, equivalent, digit, number, numeral, mentally, inverse, related, odd, even, groups, grouping, sharing, array, repeated addition,
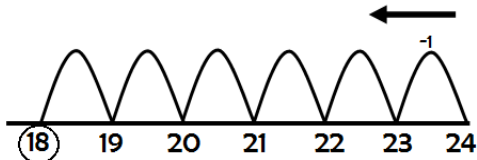
Addition and Subtraction – Year 2

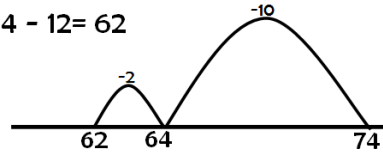- **Addition** 45+24=69   55+38=93 (using bridging and combined multiples of 10)

+10   +10   +1 +1 +1 +1

45   55   65 66 67 68 69

+30   +5   +3

55   85   90   93
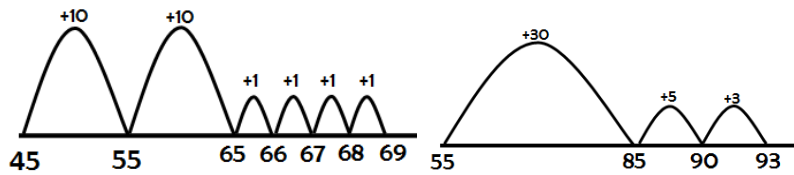
- **Subtraction – Counting Back**

24 – 6 = 18

(18) 19   20   21   22   23   24

74 – 12= 62

-10

-2

62   64   74
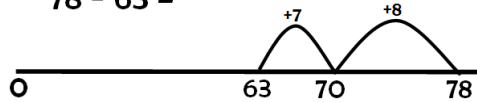
- **Subtraction – Counting Up (Finding the Difference)**

78 – 63 =

+7   +8

O   63   70   78
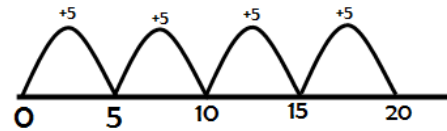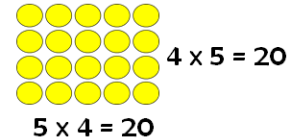
- See Year 1 and Year 3 examples for lower and higher ability pupils, if appropriate.

Multiplication and Division – Year 2
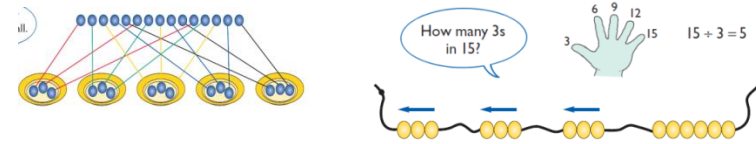
- **Multiplication** – Repeated addition 4x5=20

+5   +5   +5   +5

O   5   10   15   20

-

- **Multiplication** – Arrays

4 x 5 = 20

5 x 4 = 20

- **Division** – Practical (Understanding sharing and grouping)

How many 3s in 15?

6 9 12
3   15   15 ÷ 3 = 5

- **Division** – Number line (using grouping/ inverse of multiplication)

30 ÷ 5 = ▢

▢ x 5 = 30

+5   +5   +5   +5   +5   +5

O   5   10   15   20   25   30
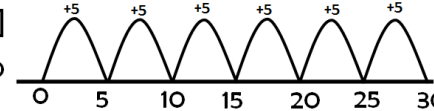
Mental Maths Coverage

- Count in steps of 2, 3 and 5 from 0
- Recall multiplication and division facts for the 2, 5 and 10 multiplication tables.
- Counting forwards and backwards in tens, starting on any number (e.g. 3 13 23…)
- Add and subtract a two digit number and ones (76 + 8), using bridging when secure with number bonds.
- Add and subtract a two digit number and tens (56+30 28+50)
- Know all pairs of multiples of 10 with totals up to 100.
- Add three one digit numbers (using number bonds, near doubles etc. to help)
- Fluently know all addition facts for every number to 20 and corresponding subtraction facts. (e.g. 7+5=12 5+7=12 12-7=5 12-5=7)
- Derive related facts for multiples of 10 (3+7=10 30+70=100   100-70=30)
- Know addition doubles to 20+20 and corresponding halves for even numbers to 20.
- To know what to add to a number to reach the next multiple of 10 (e.g. 32+__=40)
- Know odd and even numbers within counting range.
- Find half of numbers to 20 using knowledge of doubling to help.

Resources

- **Numicon** apparatus to find pairs of numbers with a given total; to aid counting in steps of a 2, 3 and 5; to support understand of partitioning.
- **Balance scales** to find equivalent number facts (11+7=18 14+4=18)
- **Bead string** – partitioning into hundreds, tens and ones; supporting bridging through 10, pairs that make 100
- **Base 10 apparatus** – partitioning, counting forwards and backwards in tens, supporting understanding of pairs of multiples of 10.
- **Place Value cards** (partitioning and recombining tens and units)
- **Number lines (0-100)** – addition and subtraction
- **Hundred Square and 200 Square** – counting forwards and backwards in tens; identifying patterns when counting in 2s, 5s or 3s; bridging through 10/100