Year 2: Maths Learning Objectives 2016- 2017

Number – number and place value

- Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward
- Read and write numbers to at least 100 in numerals and in words
- 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
- *Partition numbers in different ways (e.g. 23 = 20 + 3 and 23 = 10 + 13)*
- Compare and order numbers from 0 up to 100; use <, > and = signs
- *Find 1 or 10 more or less than a given number*
- *Round numbers to at least 100 to the nearest 10*
- *Understand the connection between the 10 multiplication table and place value*
- *Describe and extend simple sequences involving counting on or back in different steps*
- Use place value and number facts to solve problems

Number – fractions

- *Understand and use the terms numerator and denominator*
- *Understand that a fraction can describe part of a set*
- *Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be*
- 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 $\frac{1}{2}$
- *Count on and back in steps of* $\frac{1}{2}$ *and* $\frac{1}{4}$

Number – addition and subtraction

- *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting)*
- *Select a mental strategy appropriate for the numbers involved in the calculation*
- Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- *Understand subtraction as take away and difference (how many more, how many less/fewer)*
- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- *Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes)*
- 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
- Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
- Solve problems with addition and subtraction *including with missing numbers:*
  - using concrete objects and pictorial representations, including

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 2D and 3D shapes and everyday objects.

Geometry – position and direction

Number – multiplication and division

- *Understand multiplication as repeated addition*
- *Understand division as sharing and grouping and that a division calculation can have a remainder*
- Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- *Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10)*
- *Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)*
- Calculate mathematical statements for multiplication *using repeated addition)* and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
- Solve problems involving multiplication and division *(including those with remainders)*, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

Measurement

- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity and volume (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

	• Order/arrange combinations of mathematical objects in patterns/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	• Find different combinations of coins that equal the same amounts of money • 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 • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change *and measures (including time)*